GenCore version 4.5

OM nucleic - nucleic search, using sw model

Run on: September 4, 2002, 14:00:32 ; Search time 596.48 Seconds
(without alignments)
5684.861 Million cell updates/sec

Title: US-09-052-089A-8
Perfect score: 1975
Sequence: 1 GGCACGAGGTGCGGTGGAGC.....CAAAAAAAAAAAAAAAAAAA 1975

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1736436 seqs, 858457221 residues

Total number of hits satisfying chosen parameters: 3472872

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : N_Geneseq_032802:*
1: /SIDS5/gcgdata/geneseq/geneseqn-embl/NA1980.DAT:*
2: /SIDS5/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*
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23: /SIDS5/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
24: /SIDS5/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	1075.4	54.5	2065	20	AAX86754	cDNA 091-21A31 enc
	2	1072.2	54.3	2065	19	AAV29062	BRCA1 modulator pr
c	3	100	5.1	148	22	AAS27719	DNA encoding novel
c	4	55.2	2.8	1506	23	AAS75164	DNA encoding novel
	5	52.2	2.6	5154	23	AAS84859	DNA encoding novel
	6	46.2	2.3	15377	13	AAQ25975	MH mutant porcine
	7	44.8	2.3	4246	22	AAS60947	Human cancer agent
c	8	44.4	2.2	16442	18	AAX83006	Partial mouse WRN
	9	44	2.2	744	21	AAC46364	Arabidopsis thalia
	10	44	2.2	746	21	AAC38464	Arabidopsis thalia
	11	43.8	2.2	7453	22	AAI58369	Human polynucleoti
	12	43.8	2.2	7501	22	AAI58370	Human polynucleoti
	13	43.8	2.2	7741	22	AAI60155	Human polynucleoti
	14	43.8	2.2	7741	22	AAI60156	Human polynucleoti
	15	43.2	2.2	3229	22	AAK82155	Human immune/haema
	16	42.8	2.2	390	23	AAS69541	DNA encoding novel
	17	42.8	2.2	3399	17	AAT05868	Chicken leucocytoz
	18	42.4	2.1	1080	24	ABI99537	Mouse ischaemic co
	19	41.6	2.1	2000	8	AAN71065	Gene encoding Plas
	20	41	2.1	6741	21	AAA10595	Gene encoding a su
	21	40.8	2.1	1994	21	AAF21149	Human low adenosin
	22	40.8	2.1	1994	21	AAC81426	Human I-kappa-B ki
	23	40.8	2.1	1994	21	AAA35027	Human adenosine re
	24	40.8	2.1	2009	20	AAZ07513	Human RIP-associat
	25	40.8	2.1	2034	20	AAZ07514	Human RIP-associat
	26	40.8	2.1	8631	21	AAF21150	Human low adenosin
	27	40.8	2.1	8631	21	AAA35028	Human adenosine re
	28	40.4	2.0	3489	21	AAA30290	Kaposi's sarcoma-a
	29	40.4	2.0	3489	22	AAF82901	Nucleotide sequenc
c	30	40.4	2.0	32207	20	AAV73805	KSHV LUR DNA (nucl
c	31	40.4	2.0	137507	19	AAV19941	KSHV long unique c
c	32	40.2	2.0	51259	18	AAX83007	Partial mouse WRN
	33	40	2.0	941	21	AAC59944	Human secreted pro
	34	40	2.0	5874	23	AAS85420	DNA encoding novel
	35	40	2.0	6413	22	AAS46362	Tumour suppressor
	36	40	2.0	10732	21	AAA10594	Gene encoding a su
	37	39.8	2.0	1931	23	ABL06323	Drosophila melanog
	38	39.8	2.0	3931	23	ABL06322	Drosophila melanog
c	39	39.6	2.0	475	22	ABA58819	Human foetal liver
c	40	39.6	2.0	475	22	ABA27737	Probe #6203 for ge
c	41	39.6	2.0	475	22	AAK06973	Human brain expres
c	42	39.6	2.0	475	22	AAK32709	Human bone marrow
c	43	39.6	2.0	475	22	AAI38524	Probe #7210 used t
c	44	39.6	2.0	511	22	ABA71159	Human foetal liver
c	45	39.6	2.0	511	22	ABA37497	Probe #15963 for g

ALIGNMENTS

RESULT 1
AAX86754
ID AAX86754 standard; cDNA; 2065 BP.
XX
AC AAX86754;
XX
DT 27-OCT-1999 (first entry)
XX
DE cDNA 091-21A31 encoding a BRCA1 modulator protein.
XX
KW Modulator protein; BRCA1; tumour suppressor protein; breast cancer;
KW ovarian cancer; cell growth; cell proliferation; ds.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT CDS 103..1512
FT /*tag= a
XX
PN US5948643-A.
XX
PD 07-SEP-1999.
XX
PF 13-AUG-1997; 97US-0968751.
XX
PR 13-AUG-1997; 97US-0968751.
XX
PA (ONYX-) ONYX PHARM INC.
XX
PI Lingenfelter C, Polakis PG, Rubinfeld B, Vuong TT;
XX
DR WPI; 1999-517952/43.

DR P-PSDB; AAY30149.
XX
PT Modulator proteins that bind to and modulate the activity of the
PT BRCA1 tumour suppressor gene product, useful for the treatment of
PT ovarian and breast cancer
XX
PS Claim 1; Fig 1; 35pp; English.
XX
CC The present sequence encodes a modulator protein, that binds to and
CC modulate the activity of the BRCA1 gene product (BRCA1). The BRCA1
CC protein has been characterized as a tumour suppressor protein.
CC Alterations in the amino acid sequence of BRCA1 causes breast and ovarian
CC cancers by removing the controls on cell growth and proliferation.
CC Research has shown that different regions on the BRCA1 molecule have
CC different effects on cell growth and tumour suppression (e.g. full length
CC truncated BRCA1 has no effect on breast cancer cell growth but will
CC inhibit ovarian cancer cell growth). It has been suggested that different
CC host cell factors (e.g. proteins) interact with different regions of the
CC BRCA1 to control its function. The identification of these proteins
CC (e.g. BRCA1MP) will facilitate the development of novel diagnostic
CC methods and new therapeutics for identifying and treating cancers caused
CC by changes in the expression or activity of BRCA1.
XX
SQ Sequence 2065 BP; 561 A; 526 C; 561 G; 417 T; 0 other;

Query Match 54.5%; Score 1075.4; DB 20; Length 2065;
Best Local Similarity 75.1%; Pred. No. 1.7e-294;
Matches 1460; Conservative 0; Mismatches 426; Indels 59; Gaps 7;

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Qy      81 TGGTTCCCTGGGCTGCTTGAGTCGAGCCATCATGCCTATCCTCTCTCTGTGCACTATCTG 140
           ||| | |||||||  |||||||| ||||||||||||||||   ||||||||||||||||
Db      72 tggctgcctgggccccttgagtccagccatcatgcctatccgtgctctgtgcactatctg 131

Qy     141 CTCCGACTTCTTCGATCACTCCCGTGACGTGGCTGCCATCCACTGTGGCCACACTTTTCA 200
           |||||||||||||||||||||||| |||||||| |||||||||| |||||||| || ||
Db     132 ctccgacttcttcgatcactcccgcgacgtggccgccatccactgcggccacaccttcca 191

Qy     201 TCTGCAATGCCTAATCCAGTGGTTTGAGACAGCACCAAGTCGGACCTGCCCACAGTGTAG 260
             |||| |||||||| |||||||||||||||||||||||||||||||||||||||||  |
Db     192 cttgcagtgcctaattcagtggtttgagacagcaccaagtcggacctgcccacagtgccg 251

Qy     261 AATCCAGGTTGGCAAAAAGACTATTATAAACAAACTTTTCTTTGACCTCGCCCAGGAAGA 320
           ||||||||||||||||  || ||||| || || || |||||||| || ||||||||  ||
Db     252 aatccaggttggcaaaagaaccattatcaataagctcttctttgatcttgcccaggagga 311

Qy     321 GGAGAATGTCTTGGATGCAGAATTCTTAAAGAATGAACTGGACAGCGTCAAAGCTCAGCT 380
           |||||||||||||||||||||||||||||||||||||||||||||||||  |||| ||| |||||
Db     312 ggagaatgtcttggatgcagaattcttaaagaatgaactggacaatgtcagagcccagct 371

Qy     381 TTCCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACTCTACGGGACAC 440
           |||||||||||||| ||||||||| |||||||||| ||| ||||||||||| ||||| ||
Db     372 ttcccagaaagacaaggagaaacgagacagccaggtcatcatcgacactctgcgggatac 431

Qy     441 CCTGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAACAAGGCAGAGAT 500
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Db     432 gctggaagaacgcaatgctactgtggtatctctgcagcaggccttgggcaaggccgagat 491

Qy     501 GCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACCAA 560
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Db     492 gctgtgctccacactgaaaaagcagatgaagtacttagagcagcagcaggatgagaccaa 551

Qy     561 ACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATTGA 620
           |||||| |  |||||||||| ||| |||| | |||||||||| |||||||||| ||||||
Db     552 acaagcacaagaggaggcccgccggctcaggagcaagatgaagaccatggagcagattga 611

Qy     621 GCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGG 680
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Qy     681 ACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAA 740
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Qy     741 TCTGAAGGAAGCTCGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGT 800
           ||| || || || ||||||||| |||||||  ||||||||| | ||| ||||||||||| |
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Qy     801 GTCCTCTAGGAGCAAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAACT 860
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Db     792 ttcctccagaagcaagttgcagacagtctactctgaattggatcaggccaagttagaact 851

Qy     861 GAGGTCAGCCCAGAAGGACTTACAAAGTGCTGACCAGGAGATCACGAGCCTAAGAAAGAA 920
           || |||||||||||||||||||||| ||||||||| |||| |||| |||||| | ||||||
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Qy     921 GTCTGATGATCCTCCAGGGAACCTTGAGCCTGCCTCC-GCGACCAATGAGACGGTCAGCC 979
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Qy     980 GCCTGGTTTTTGAGAGCCCAGCCCCTGTGGAGATGATGAACCCGAGGCTTCACCAGCCAC 1039
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Db     971 gcctggttttagagagcccagcccctgtgga---ggtgaatctgaagctccgccggccat 1027

Qy    1040 CCTTCGGTGATGAGATTGATCTCAATACCACCTTTGATGTAAATACCCCTCCAACCCAGA 1099
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Db    1028 ccttccgtgatgatattgatctcaatgctacctttgatgtggatactcccccagcccggc 1087

Qy    1100 CCTCTGGCTCCCAGCATTGCCTCCCCAAGAAGCTGTGCCTGGAGAGGGCACGCTCTCCCA 1159
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Db    1088 cctccagctcccagcatggttactacgaaaaactttgcctagagaagtcacactccccaa 1147

Qy    1160 TGCAGAATGTCCTCAAGAAGGTGCACAAAGTCTCCAAGCCGGAGTCCCAGCTCTCACTGG 1219
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Qy    1280 TCCGGAATGCTGTCCTGGGTCAGAAACAGCCCAACAGGACCACAGCAGAATCCCGAAGCA 1339
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Qy    1400 CTAGGGACACAACCATTATCCGACCAGTGCCTGTTAAGTCCAAGGCCAAGAGTAAACAGA 1459
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Qy    1460 AAGTGAGAATAAAGACTGTGAGTTCTGCCTCCCAGCCCAAGCTGGATACCTTCTTATGTC 1519
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           |                 ||| |  || |||||   |||  |||||  | || || ||||
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Qy    1565 CTGGCTAACCGGAAGTGTTTTTGGAAGATGGCTCCTCTTGGACC--------------- 1608
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Db    1568 ctgtccaggcaggggttttgtggacagagccccactttcgggaccagcctgaggtgtaag 1627

Qy    1609 ----------------AGTCCAAGAGAGATGCCCAGAAAACACACTTCCTGTGTTCACTG 1652
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Qy    1653 CGCCCTGCACC--ACACTGGGAAGCCACATGACCAGTTTACTGTTCCGATCAGCAGGGCC 1710
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Qy    1711 TACTTCCAGTTGCAGGGTTTTGCTTATAGCTACAACCAGGTGTGGCTGGACTCCTTTTGT 1770
           | || |  |  |||| |  || |||||||  |  | ||| |||||   ||||| || ||
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Qy   1771 TTTTATAGAACAGGGTCACATTGACTCTAAGTGGATGGGAGTGCTGGAGGATCCTATGCA 1830
Db   1808 gcctggagaccacggtcacttgttgactgtctctgtggaccag-----agtgcttgaggc 1862

Qy   1831 GGCTGGAGGACCCTGCGCTTGAACTCCTGCCTGCCTCCAGCTTATTGCTTGAAATTATGG 1890
Db   1863 atctcaggcagcctcagcccaagcttctacctgcctttgacttgcttctaggcatagcct 1922

Qy   1891 GGTGAGGTGGTGATAGGGAAAGGTTGGGGAAGTTTTCTGTGTAAAATAAAAAGGGATCTT 1950
Db   1923 gggccaagcagggtggggaatggaggatagcatgggatgtatggagaggatggaagattt 1982

Qy   1951 TTCTTCAAAAAAAAAAAAAAAAAAA 1975
Db   1983 tcatgtaaaataaaattaaaaaaaa 2007


RESULT   2
AAV29062
ID   AAV29062 standard; cDNA; 2065 BP.
XX
AC   AAV29062;
XX
DT   28-AUG-1998  (first entry)
XX
DE   BRCA1 modulator protein 091-21A31 cDNA.
XX
KW   BRCA1 modulator protein; 091-21A31; breast cancer antigen 1;
KW   tumour suppressor protein; diagnosis; therapy; human; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             103..1512
FT                   /*tag= a
XX
PN   WO9810066-A1.
XX
PD   12-MAR-1998.
XX
PF   06-AUG-1997;   97WO-US13944.
XX
PR   04-SEP-1996;   96US-0025601.
XX
PA   (ONYX-) ONYX PHARM INC.
XX
PI   Ligenfelter C,  Polakis P,  Rubinfeld B,  Vuong TT;
XX
DR   WPI; 1998-193616/17.
DR   P-PSDB; AAW37881.
XX
PT   Breast cancer antigen 1 modulator protein - useful for diagnosing
PT   diseases involving unwanted cell growth, e.g. breast cancer, and for
PT   producing therapeutics for treatment of such diseases
XX
PS   Claim 5; Fig 1; 73pp; English.
XX
CC   This cDNA clone, designated 091-21A31 (ATCC 98141), codes for
CC   a 53 kDa BRCA1 modulator protein (see AAW37881) that binds to the
CC   tumour suppressor gene product BRCA1, and which is characterised by
CC   a zinc finger domain and a leucine zipper motif.  3 cDNA clones
CC   (see also AAV29063 and AAV29064) coding for BRCA1 modulator proteins
CC   (see AAW37881-83) were isolated from a HeLa cDNA library using a
CC   yeast two-hybrid assay with a GAL4-BRCA1(8-1293) fusion as bait.
CC   Vectors and host cells comprising the isolated nucleic acid
CC   sequences are claimed, as well as a process for producing BRCA1
CC   modulator protein by culturing these host cells.  BRCA1 modulator
CC   proteins and nucleic acids can be used to diagnose diseases
CC   involving unwanted cell growth, e.g. breast cancer, and to identify
CC   compounds that alter BRCA1 interaction with BRCA1 modulators for
CC   the treatment of such diseases.
XX
SQ   Sequence 2065 BP; 561 A; 528 C; 559 G; 417 T; 0 other;
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  Query Match             54.3%;  Score 1072.2;  DB 19;  Length 2065;
  Best Local Similarity   75.0%;  Pred. No. 1.4e-293;
  Matches 1458;  Conservative    0;  Mismatches  428;  Indels   59;  Gaps    7;

Qy     81 TGGTTCCCTGGGCTGCTTGAGTCGAGCCATCATGCCTATCCTCTCTCTGTGCACTATCTG 140
Db     72 tggctgcctgggccccttgactccagccatcatgcctatccgtgctctgtgcactatctg 131

Qy    141 CTCCGACTTCTTCGATCACTCCCGTGACGTGGCTGCCATCCACTGTGGCCACACTTTTCA 200
Db    132 ctccgacttcttcgatcactcccgcgacgtggccgccatccactgcggccacaccttcca 191

Qy    201 TCTGCAATGCCTAATCCAGTGGTTTGAGACAGCACCAAGTCGGACCTGCCCACAGTGTAG 260
Db    192 cttgcagtgcctaattcagtggtttgagacagcaccaagtcggacctgcccacagtgccg 251

Qy    261 AATCCAGGTTGGCAAAAAGACTATTATAAACAAACTTTTCTTTGACCTCGCCCAGGAAGA 320
Db    252 aatccaggttggcaaaagaaccattatcaataagctcttctttgatcttgcccaggagga 311

Qy    321 GGAGAATGTCTTGGATGCAGAATTCTTAAAGAATGAACTGGACAGCGTCAAAGCTCAGCT 380
Db    312 ggagaatgtcttggatgcagaattcttaaagaatgaactggacaatgtcagagcccagct 371

Qy    381 TTCCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACTCTACGGGACAC 440
Db    372 ttcccagaaagacaaggagaaacgagacagccaggtcatcatcgacactctgcgggatac 431

Qy    441 CCTGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAACAAGGCAGAGAT 500
Db    432 gctggaagaacgcaatgctactgtggtatctctgcagcaggccttgggcaaggccgagat 491

Qy    501 GCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACCAA 560
Db    492 gctgtgctccacactgaaaaagcagatgaagtacttagagcagcagcaggatgagaccaa 551

Qy    561 ACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATTGA 620
Db    552 acaagcacaagaggaggcccgccggctcaggagcaagatgaagaccatggagcagattga 611

Qy    621 GCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGG 680
Db    612 gcttctactccagagccagcgccctgaggtggaggagatgatccgagacatgggtgtggg 671

Qy    681 ACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAA 740
Db    672 acagtcagcggtggaacagctggctgtgtactgtgtgtctctcaagaaagagtacgagaa 731

Qy    741 TCTGAAGGAAGCTCGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGT 800
Db    732 tctaaaagaggcacggaaggcctcaggggaggtggctgacaagctgaggaaggatttgtt 791

Qy    801 GTCCTCTAGGAGCAAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAACT 860
Db    792 ttcctccagaagcaagttgcagacagtctactctgaattggatcaggccaagttagaact 851

Qy    861 GAGGTCAGCCCAGAAGGACTTACAAAGTGCTGACCAGGAGATCACGAGCCTAAGAAAGAA 920
Db    852 gaagtcagcccagaaggacttacagagtgctgacaaggaaatcatgagcctgaaaaagaa 911

Qy    921 GTCTGATGATCCTCCAGGGAACCTTGAGCCTGCCTCC-GCGACCAATGAGACGGTCAGCC 979
Db    912 g-ctaacgatgctgcaggaaaccttgaacctgccaccagtggccagtgagactgtcgacc 970

Qy    980 GCCTGGTTTTTGAGAGCCCAGCCCCTGTGGAGATGATGAACCCGAGGCTTCACCAGCCAC 1039
Db    971 gcctggttttagagagcccagcccctgtgga---ggtgaatctgaagctccgccggccat 1027

Qy   1040 CCTTCGGTGATGAGATTGATCTCAATACCACCTTTGATGTAAATACCCCTCCAACCCAGA 1099
Db   1028 ccttccgtgatgatattgatctcaatgctacctttgatgtggatactcccccagcccggc 1087
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Qy   1100 CCTCTGGCTCCCAGCATTGCCTCCCCAAGAAGCTGTGCCTGGAGAGGGCACGCTCTCCCA 1159
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Db   1088 cctccagctcccagcatggttactacgaaaaactttgcctagagaagtcacactccccaa 1147

Qy   1160 TGCAGAATGTCCTCAAGAAGGTGCACAAAGTCTCCAAGCCGGAGTCCCAGCTCTCACTGG 1219
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Db   1148 ttcaggatgtccccaagaagatatgcaaaggccccaggaaggagtcccagctctcactgg 1207

Qy   1220 GTGGCCAGCGATGTGTAGGAGAGCTAGATGAGGAACTGGCTGGTGCCTTCCCTCTCTTCA 1279
          |||||||| | |||| |||||||| |||||||||||||| |||||||||||| | ||
Db   1208 gtggccagagctgtgcaggagagccagatgaggaactggttggtgccttccctatttttg 1267

Qy   1280 TCCGGAATGCTGTCCTGGGTCAGAAACAGCCCAACAGGACCACAGCAGAATCCCGAAGCA 1339
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Qy   1400 CTAGGGACACAACCATTATCCGACCAGTGCCTGTTAAGTCCAAGGCCAAGAGTAAACAGA 1459
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Db   1388 ctactgacacagtcatgatccgcccattgcctgttaagcccaagaccaaggttaagcaga 1447

Qy   1460 AAGTGAGAATAAAGACTGTGAGTTCTGCCTCCCAGCCCAAGCTGGATACCTTCTTATGTC 1519
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Db   1568 ctgtccaggcaggggttttgtggacagagccccactttcgggaccagcctgaggtgtaag 1627

Qy   1609 ---------------AGTCCAAGAGAGATGCCCAGAAAACACACTTCCTGTGTTCACTG 1652
                        ||    || | ||  |||||| |   | |||||||   ||||
Db   1628 ggcagacaaacaggtgagggtgagtgtgacacccagagactgctcttcctgccctcaccc 1687

Qy   1653 CGCCCTGCACC--ACACTGGGAAGCCACATGACCAGTTTACTGTTCCGATCAGCAGGGCC 1710
            ||||  | ||    |||||||    ||||||||||   |||| |||  |||||||| ||
Db   1688 tgccccactcctacgactgggagctgacatgaccagcccactgatcctgtcagcaggtcc 1747

Qy   1711 TACTTCCAGTTGCAGGGTTTTGCTTATAGCTACAACCAGGTGTGGCTGGACTCCTTTTGT 1770
          | || |   |  |||| |  || |||||||  |  | ||| |||||   ||||| || ||
Db   1748 tgctcctgttgccaggctcctgtttatagccatgatcagatgtggtcagactctttctgg 1807

Qy   1771 TTTTATAGAACAGGGTCACATTGACTCTAAGTGGATGGGAGTGCTGGAGGATCCTATGCA 1830
             |  ||| || |||||| |     ||   |   |||    |      |  | |  |
Db   1808 gcctggagaccacggtcacttgttgactgtctctgtggaccag-----agtgcttgaggc 1862

Qy   1831 GGCTGGAGGACCCTGCGCTTGAACTCCTGCCTGCCTCCAGCTTATTGCTTGAAATTATGG 1890
            ||   | | |||  ||   | || || |||||||    |||  | || |  ||
Db   1863 atctcaggcagcctcagcccaagcttctacctgcctttgacttgcttctaggcatagcct 1922

Qy   1891 GGTGAGGTGGTGATAGGGAAAGGTTGGGGAAGTTTTCTGTGTAAAATAAAAAGGGATCTT 1950
          ||         | | ||||| ||  |       |    ||| |  |    |  |     ||
Db   1923 gggccaagcagggtggggaatggaggatagcatgggatgtatggagaggatggaagattt 1982

Qy   1951 TTCTTCAAAAAAAAAAAAAAAAAAA 1975
          |  |  |||| ||||  ||||||||
Db   1983 tcatgtaaaataaaattaaaaaaaa 2007
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RESULT 3
AAS27719/c
ID AAS27719 standard; DNA; 148 BP.
XX
AC AAS27719;
XX
DT 07-NOV-2001 (first entry)
XX
DE DNA encoding novel signal transduction pathway protein, Seq ID 1379.
XX
KW Neuroprotective; cytostatic; dermatological; immunosuppressive; tumour;
KW antiinflammatory; anti-HIV; antibacterial; antiinflammatory; cancer;
KW immune system disorder; rheumatoid arthritis; inflammatory condition;
KW organ transplant rejection; infection; hepatitis C; blood disorder;
KW sickle cell anaemia; hyperproliferative disorder; Gaucher's disease;
KW neurodegenerative disorder; Alzheimer's disease; Parkinson's disease;
KW chromosomal abnormality; Down syndrome; ischaemia; renal disorder;
KW cardiovascular; respiratory; wound healing; endocrine; Addison's disease;
KW reproductive system; gastrointestinal; liver disorder; AIDS; ds;
KW acquired immune deficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200154733-A1.
XX
PD 02-AUG-2001.
XX
PF 17-JAN-2001; 2001WO-US01312.
XX
PR 31-JAN-2000; 2000US-0179065.
PR 04-FEB-2000; 2000US-0180628.
PR 24-FEB-2000; 2000US-0184664.
PR 02-MAR-2000; 2000US-0186350.
PR 16-MAR-2000; 2000US-0189874.
PR 17-MAR-2000; 2000US-0190076.
PR 18-APR-2000; 2000US-0198123.
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PR 07-JUN-2000; 2000US-0209467.
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PR 07-JUL-2000; 2000US-0216647.
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PR 22-AUG-2000; 2000US-0227182.
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PR 01-SEP-2000; 2000US-0229287.
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PR 01-SEP-2000; 2000US-0229345.
PR 05-SEP-2000; 2000US-0229509.
PR 05-SEP-2000; 2000US-0229513.
PR 06-SEP-2000; 2000US-0230437.
PR 06-SEP-2000; 2000US-0230438.
PR 08-SEP-2000; 2000US-0231242.
PR 08-SEP-2000; 2000US-0231243.
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PR 08-SEP-2000; 2000US-0231413.
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PR 12-SEP-2000; 2000US-0231968.
PR 14-SEP-2000; 2000US-0232397.
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PR 14-SEP-2000; 2000US-0232399.
PR 14-SEP-2000; 2000US-0232400.
PR 14-SEP-2000; 2000US-0232401.
PR 14-SEP-2000; 2000US-0233063.
PR 14-SEP-2000; 2000US-0233064.
PR 14-SEP-2000; 2000US-0233065.
PR 21-SEP-2000; 2000US-0234223.
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PR 25-SEP-2000; 2000US-0234997.
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PR 26-SEP-2000; 2000US-0235484.
PR 27-SEP-2000; 2000US-0235834.
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PR 29-SEP-2000; 2000US-0236327.
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PR 02-OCT-2000; 2000US-0236802.
PR 02-OCT-2000; 2000US-0237037.
PR 02-OCT-2000; 2000US-0237038.
PR 02-OCT-2000; 2000US-0237039.
PR 02-OCT-2000; 2000US-0237040.
PR 13-OCT-2000; 2000US-0239935.
PR 13-OCT-2000; 2000US-0239937.
PR 20-OCT-2000; 2000US-0240960.
PR 20-OCT-2000; 2000US-0241221.
PR 20-OCT-2000; 2000US-0241785.
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PR 20-OCT-2000; 2000US-0241787.
PR 20-OCT-2000; 2000US-0241808.
PR 20-OCT-2000; 2000US-0241809.
PR 20-OCT-2000; 2000US-0241826.
PR 01-NOV-2000; 2000US-0244617.
PR 08-NOV-2000; 2000US-0246474.
PR 08-NOV-2000; 2000US-0246475.
PR 08-NOV-2000; 2000US-0246476.
PR 08-NOV-2000; 2000US-0246477.
PR 08-NOV-2000; 2000US-0246478.
PR 08-NOV-2000; 2000US-0246523.
PR 08-NOV-2000; 2000US-0246524.
PR 08-NOV-2000; 2000US-0246525.
PR 08-NOV-2000; 2000US-0246526.
PR 08-NOV-2000; 2000US-0246527.
PR 08-NOV-2000; 2000US-0246528.
PR 08-NOV-2000; 2000US-0246532.
PR 08-NOV-2000; 2000US-0246609.
PR 08-NOV-2000; 2000US-0246610.
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PR 08-NOV-2000; 2000US-0246613.
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PR 17-NOV-2000; 2000US-0249208.
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PR 17-NOV-2000; 2000US-0249214.
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PR 17-NOV-2000; 2000US-0249216.
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PR 06-DEC-2000; 2000US-0251479.
PR 08-DEC-2000; 2000US-0251856.
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PR 08-DEC-2000; 2000US-0251869.
PR 08-DEC-2000; 2000US-0251989.
PR 08-DEC-2000; 2000US-0251990.
PR 11-DEC-2000; 2000US-0254097.
PR 05-JAN-2001; 2001US-0259678.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
XX
PI Rosen CA, Barash SC, Ruben SM;
XX
DR WPI; 2001-465460/50.
XX
PT Novel polypeptides useful for diagnosing, treating, preventing and/or
PT prognosing disorders related to the proteins, including cancers, immune
PT disorders and neuronal disorders -
XX
PS Claim 1; SEQ ID No 1379; 880pp; English.
XX
CC The invention relates to novel isolated polypeptides (I), and
CC polynucleotides (II). (I), (II) and the antibody to (I) are useful for
CC diagnosing, preventing and treating diseases including immune system
CC disorders (e.g. congenital and acquired immunodeficiencies, autoimmune
CC disorders (e.g rheumatoid arthritis), inflammatory conditions, organ
CC transplant rejections and graft versus host disease, infectious diseases
CC (e.g. hepatitis C), bleeding disorders, haemoglobin abnormalities and
CC other blood-related disorders (sickle cell anaemia), myeloproliferative
CC disorders, primary haematopoietic disorders, hyperproliferative
CC disorders (e.g. Gaucher's disease and cancer), neurodegenerative
CC disorders (e.g. Alzheimer's disease, Parkinson's disease), chromosomal
CC abnormalities (Down syndrome), ischaemic injury (e.g. stroke), renal
CC disorders (e.g. glomerulonephritis), cardiovascular disorders
CC (e.g. arrhythmia), respiratory disorders, dermatological disorders, in
CC wound healing, epithelial cell proliferation, endocrine disorders (e.g.
CC Addison's disease), reproductive system disorders, gastrointestinal
CC disorder (inflammatory disorders), liver disorders (cirrhosis),
CC as stimulators of B-cell responsiveness to pathogens, activators of
CC T-cells, to induce higher affinity antibodies, and as a means to induce
CC tumour proliferation in pathologies e.g. acquired immune deficiency
CC syndrome (AIDS). AAS26976-AAS27850 represent novel signal transduction
CC pathway protein coding sequences and PCR primers of the invention.
XX
SQ Sequence 148 BP; 38 A; 33 C; 56 G; 21 T; 0 other;

Query Match 5.1%; Score 100; DB 22; Length 148;
Best Local Similarity 87.9%; Pred. No. 2.8e-18;
Matches 109; Conservative 0; Mismatches 15; Indels 0; Gaps 0;

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Qy      81 TGGTTCCCTGGGCTGCTTGAGTCGAGCCATCATGCCTATCCTCTCTCTGTGCACTATCTG 140
           ||| | |||||||  ||||||||  ||||||||||||||||||   ||||||||||||||||
Db     124 TGGCTGCCTGGGCCCCTTGAGTCCAGCCATCATGCCTATCCGTGCTCTGTGCACTATCTG 65

Qy     141 CTCCGACTTCTTCGATCACTCCCGTGACGTGGCTGCCATCCACTGTGGCCACACTTTTCA 200
           |||||||||||||||||||||||| |||||||| |||||||||| |||||||| || ||
Db      64 CTCCGACTTCTTCGATCACTCCCGCGACGTGGCCGCCATCCACTGCGGCCACACCTTCCA 5

Qy     201 TCTG 204
             ||
Db       4 CTTG 1
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RESULT 4
AAS75164/c
ID AAS75164 standard; cDNA; 1506 BP.
XX
AC AAS75164;
XX

DT 13-FEB-2002 (first entry)
XX
DE DNA encoding novel human diagnostic protein #10968.
XX
KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder; ss.
XX
OS Homo sapiens.
XX
PN WO200175067-A2.
XX
PD 11-OCT-2001.
XX
PF 30-MAR-2001; 2001WO-US08631.
XX
PR 31-MAR-2000; 2000US-0540217.
PR 23-AUG-2000; 2000US-0649167.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Drmanac RT, Liu C, Tang YT;
XX
DR WPI; 2001-639362/73.
DR P-PSDB; ABG10977.
XX
PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity -
XX
PS Claim 1; SEQ ID No 10968; 103pp; English.
XX
CC The invention relates to isolated polynucleotide (I) and
CC polypeptide (II) sequences. (I) is useful as hybridisation probes,
CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome
CC and gene mapping, and in recombinant production of (II). The
CC polynucleotides are also used in diagnostics as expressed sequence tags
CC for identifying expressed genes. (I) is useful in gene therapy techniques
CC to restore normal activity of (II) or to treat disease states involving
CC (II). (II) is useful for generating antibodies against it, detecting or
CC quantitating a polypeptide in tissue, as molecular weight markers and as
CC a food supplement. (II) and its binding partners are useful in medical
CC imaging of sites expressing (II). (I) and (II) are useful for treating
CC disorders involving aberrant protein expression or biological activity.
CC The polypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations
CC responsible for genetic disorders or other traits to assess biodiversity
CC and to produce other types of data and products dependent on DNA and
CC amino acid sequences. AAS64197-AAS94564 represent novel human
CC diagnostic coding sequences of the invention.
CC Note: The sequence data for this patent did not appear in the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 1506 BP; 245 A; 514 C; 348 G; 399 T; 0 other;

Query Match 2.8%; Score 55.2; DB 23; Length 1506;
Best Local Similarity 44.9%; Pred. No. 5.1e-05;
Matches 210; Conservative 0; Mismatches 258; Indels 0; Gaps 0;

Qy 509 CCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTC 568
Db 1319 CCATCCACAATGCAGACCTGAGCCGCCTGGAGCAGCTGGGGGAGGAGAACCAGCGGTTGC 1260

Qy 569 GGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTAC 628
Db 1259 TGAAGCAGACAGAGATGCTGACCCAGCAGAGGGACACGGCCATCCAGCTGCAGCACCAGT 1200

Qy 629 TCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAG 688
Db 1199 GCGCCCTCTCCCTGAGGAGGTTTGAGGCGATCCACCATGAGCTGAACAAGGCCACGGCGC 1140

Qy 689 CGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGG 748
Db 1139 AGAACAAGGACCTGCAGTGGGAGATGGAGCTGCTGCAGTCAGAGCTGACCGAGCTGAGAA 1080

Qy 749 AAGCTCGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTA 808
Db 1079 CCACGCAGGTGAAGACAGCAAAGGAGTCGGAGAAATACAGGGAGGAGCGGGACGCTGTGT 1020

Qy 809 GGAGCAAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAACTGAGGTCAG 868
Db 1019 ACAGCGAGTACAAGCTCATCATGAGTGAGCGTGACCAGGTCATCTCTGAGCTGGACAAGC 960

Qy 869 CCCAGAAGGACTTACAAAGTGCTGACCAGGAGATCACGAGCCTAAGAAAGAAGTCTGATG 928
Db 959 TGCAGACCGAAGTGGAGCTGGCCGAGTCCAAGCTCAAGAGCAGCACATCTGAGAAGAAGG 900

Qy 929 ATCCTCCAGGGAACCTTGAGCCTGCCTCCGCGACCAATGAGACGGTCA 976
Db 899 CGGCCAATGAGGAGATGGAGGCGCTGCGGCAGATCAAAGACACGGTGA 852

RESULT 5
AAS84859
ID AAS84859 standard; cDNA; 5154 BP.
XX
AC AAS84859;
XX
DT 13-FEB-2002 (first entry)
XX
DE DNA encoding novel human diagnostic protein #20663.
XX
KW Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW food supplement; medical imaging; diagnostic; genetic disorder; ss.
XX
OS Homo sapiens.
XX
PN WO200175067-A2.
XX
PD 11-OCT-2001.
XX
PF 30-MAR-2001; 2001WO-US08631.
XX
PR 31-MAR-2000; 2000US-0540217.
PR 23-AUG-2000; 2000US-0649167.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Drmanac RT, Liu C, Tang YT;
XX
DR WPI; 2001-639362/73.
DR P-PSDB; ABG20672.
XX
PT New isolated polynucleotide and encoded polypeptides, useful in
PT diagnostics, forensics, gene mapping, identification of mutations
PT responsible for genetic disorders or other traits and to assess
PT biodiversity -
XX
PS Claim 1; SEQ ID No 20663; 103pp; English.
XX
CC The invention relates to isolated polynucleotide (I) and
CC polypeptide (II) sequences. (I) is useful as hybridisation probes,
CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome
CC and gene mapping, and in recombinant production of (II). The
CC polynucleotides are also used in diagnostics as expressed sequence tags
CC for identifying expressed genes. (I) is useful in gene therapy techniques
CC to restore normal activity of (II) or to treat disease states involving
CC (II). (II) is useful for generating antibodies against it, detecting or
CC quantitating a polypeptide in tissue, as molecular weight markers and as
CC a food supplement. (II) and its binding partners are useful in medical
CC imaging of sites expressing (II). (I) and (II) are useful for treating
CC disorders involving aberrant protein expression or biological activity.
CC The polypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations

```
CC   responsible for genetic disorders or other traits to assess biodiversity
CC   and to produce other types of data and products dependent on DNA and
CC   amino acid sequences. AAS64197-AAS94564 represent novel human
CC   diagnostic coding sequences of the invention.
CC   Note: The sequence data for this patent did not appear in the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 5154 BP; 1544 A; 1236 C; 1478 G; 896 T; 0 other;


  Query Match             2.6%;  Score 52.2;  DB 23;  Length 5154;
  Best Local Similarity   48.5%;  Pred. No. 0.00071;
  Matches  175;  Conservative    0;  Mismatches  183;  Indels    3;  Gaps    1;

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Qy     545 GGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAA 604
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Db     554 tacaagatgaggccaaacacctgaggcaggaggtggaaggtctggagggaaagctccaat 613

Qy     605 CCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGATTC 664
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Qy     722 TCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGGGGAACTGGCTGACA 781
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Qy     782 GGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTGAAGACTCTCAACACTGAGCTGG 841
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Db     794 ggctgcgaaagcaggagcagaggctacgcaaacaggaggagaggctgcgaaaggaggagg 853

Qy     842 A 842
           |
Db     854 a 854


RESULT   6
AAQ25975
ID   AAQ25975 standard; DNA; 15377 BP.
XX
AC   AAQ25975;
XX
DT   08-JAN-1993  (first entry)
XX
DE   MH mutant porcine ryanodine receptor cDNA.
XX
KW   MH; RYR1; calcium release channel; sarcoplasmic reticulum;
KW   transverse tubule; Pietrain; Yorkshire; polymorphism; beta strand; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
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FT   variation       207
FT                   /*tag=  b
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FT   variation       4383
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FT   variation       6867
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FT   variation       7692
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FT   variation       8940
FT                   /*tag=  o
FT                   /label= Polymorphic_site
FT   variation       9192
FT                   /*tag=  p
FT                   /label= Polymorphic_site
FT   variation       9585
FT                   /*tag=  q
FT                   /label= Polymorphic_site
FT   variation       9600
FT                   /*tag=  r
FT                   /label= Polymorphic_site
FT   variation       9951
FT                   /*tag=  s
FT                   /label= Polymorphic_site
FT   variation       10111
FT                   /*tag=  t
FT                   /label= Polymorphic_site
FT   variation       11250
FT                   /*tag=  u
FT                   /label= Polymorphic_site
FT   variation       12300
FT                   /*tag=  v
FT                   /label= Polymorphic_site
FT   variation       14007
FT                   /*tag=  w
FT                   /label= Polymorphic_site
FT   polyA_signal    15355..15360
FT                   /*tag=  x
XX
PN   WO9211387-A.
XX
PD   09-JUL-1992.
XX
PF   20-DEC-1991;   91WO-CA00457.
XX
PR   21-DEC-1990;   90GB-0027869.
PR   20-MAY-1991;   91GB-0010865.
PR   09-SEP-1991;   91GB-0019250.
XX
PA   (UYGU-) UNIV GUELPH.
PA   (UTOR ) UNIV TORONTO INNOVATIONS FOUND.
XX
PI   MacLennan DH,  O'Brien PJ;
XX
```

```
DR   WPI; 1992-250106/30.
DR   P-PSDB; AAR25450.
XX
PT   Purified DNA mol. for diagnosis of porcine malignant hyperthermia
PT   - comprises DNA sequence encoding normal or mutant ryanodine
PT   receptor with specified endonuclease restriction map
XX
PS   Disclosure; Fig 2; 96pp; English.
XX
CC   The sequence given is the mutant pig ryanodine receptor (RYR1) gene
CC   from swine cDNA.  The polymorphic sites were observed in comparisons
CC   of Pietrain and Yorkshire breeds.  There are 17 polymorphisms between
CC   the two breeds.  The polymorphism at position 1972 causes a mutation
CC   from Arg to Cys and this is thought to be the molecular basis of
CC   porcine malignant hyperthermia (MH).  This mutation lies within the
CC   region of RYR1 that is concerned with the binding of regulators of Ca2+
CC   release channel gating.  Analysis of surrounding sequences suggests
CC   that this mutation lies within a beta strand domain comprising roughly
CC   of amino acids 520 to 830.  RYR1 is the calcium release channel of the
CC   sarcoplasmic reticulum and is a large protein which spans the gap
CC   between the transverse tubule and the sarcoplasmic reticulum.  The
CC   cannel is activated by ATP, calcium, caffine, and micro-molar
CC   ryanodine.  It is inhibited by ruthenium red, tetracaine, calmodulin,
CC   high Mg2+ and ryanodine.
XX
SQ   Sequence 15377 BP; 3197 A; 4630 C; 4755 G; 2774 T; 21 other;

  Query Match             2.3%;  Score 46.2;  DB 13;  Length 15377;
  Best Local Similarity   51.2%;  Pred. No. 0.065;
  Matches  108;  Conservative    0;  Mismatches  103;  Indels    0;  Gaps    0;

Qy     590 AGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGG 649
           ||  |  || | | |  | || ||   |||||| |  | |    |   ||      ||||
Db    5702 aggacgtgaagcagatcttgaagatgattgagcccgaagtattcactgaggaagaagagg 5761

Qy     650 TGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGT 709
           |||||||  |     |||   ||  |  | | |    | || | || ||  || || |
Db    5762 aggaggaggaggaagaagaggaggaagaagaagatgaggaggagaaggaggaggatgagg 5821

Qy     710 ACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGGGG 769
           |    | | | |   |||| ||| ||||| |     ||||||    ||  ||   |||||
Db    5822 aggaggaggcacgggagaaggaggatgaggaaaaagaggaagaggagacagcagaagggg 5881

Qy     770 AACTGGCTGACAGGTTGAAGAAGGATTTGGT 800
           ||   |  ||    ||| || | |   || |
Db    5882 aaaaagaagaatacttggaggaagggctgct 5912


RESULT   7
AAS60947
ID   AAS60947 standard; cDNA; 4246 BP.
XX
AC   AAS60947;
XX
DT   29-JAN-2002  (first entry)
XX
DE   Human cancer agent-resistance marker #606.
XX
KW   Human; cancer cell marker; TAXOL; cytostatic; tumour; carcinoma;
KW   squamous cell carcinoma; sarcoma; fibrosarcoma; leukaemia;
KW   lymphocytic leukaemia; lymphoma; plasmocytoma; reticulum cell sarcoma;
KW   Hodgkin's disease; glioma; ss.
XX
OS   Homo sapiens.
XX
PN   WO200179556-A2.
XX
PD   25-OCT-2001.
XX
PF   13-APR-2001; 2001WO-US12132.
XX
PR   14-APR-2000; 2000US-197538P.
XX
PA   (MILL-) MILLENNIUM PREDICTIVE MEDICINE INC.
XX
PI   Lillie J,  Brown JL,  Bolt A,  Van Huffel C;
XX
DR   WPI; 2001-602933/68.
XX
PT   Novel nucleic acid, used as a marker to determine the effectiveness of
PT   using TAXOL to treat cancer cell growth in individuals -
XX
PS   Claim 1; Page 450-451; 527pp; English.
XX
CC   The invention relates to 1046 novel nucleic acids which are used as
CC   markers for determining the sensitivity of a cancer cell to the
CC   anticancer agent TAXOL. Cancer cells can be treated with TAXOL when
CC   they are shown to express one of the 242 sensitivity markers or the
CC   cells are shown not to express one of the 804 resistance markers.
CC   The methods can be used to determine the effectiveness of TAXOL
CC   in the treatment of cancer cell growth in an individual. The markers
CC   can be used as targets in developing anti-cancer agents such as
CC   chemotherapeutic compounds. The markers can also be used as targets in
CC   developing treatments for cancer, particularly those cancers which
CC   display resistance to agents and exhibit expression of the markers. The
CC   anticancer agents developed by the novel method can be used to treat
CC   cancer. Probes based on the markers can be used to detect transcripts or
CC   genomic sequences corresponding to the markers, in the identification of
CC   cells or tissues which mis-express the protein. Cancers which may
CC   be targeted include carcinoma (e.g. squamous cell carcinoma),
CC   sarcoma (e.g. fibrosarcoma) leukaemia (e.g. lymphocytic leukaemia),
CC   lymphoma, plasmocytoma, reticulum cell sarcoma, Hodgkin's disease and
CC   tumours (e.g. glioma). The present sequence is one of the 1046
CC   novel cancer cell markers.
XX
SQ   Sequence 4246 BP; 1217 A; 1019 C; 1183 G; 827 T; 0 other;

  Query Match             2.3%;  Score 44.8;  DB 22;  Length 4246;
  Best Local Similarity   46.7%;  Pred. No. 0.08;
  Matches  142;  Conservative    0;  Mismatches  162;  Indels    0;  Gaps    0;

Qy     313 CAGGAAGAGGAGAATGTCTTGGATGCAGAATTCTTAAAGAATGAACTGGACAGCGTCAAA 372
           ||| | ||||||  | |    ||       |   | |  ||||  || ||     | |  |
Db     772 cagcaggaggaggaggaggaggccaggaagaacctggagaagcaagtgctggccctgcag 831

Qy     373 GCTCAGCTTTCCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACTCTA 432
           | ||| |  |  | |   | | | |   |   |||  || ||  |  || || | |||
Db     832 tcccagttggctgataccaagaagaaagtagatgacgacctgggaacaattgaaagtctg 891

Qy     433 CGGGACACCCTGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAACAAG 492
           ||  ||  | |  | |          || |||| ||||     |   | |  |  ||
Db     892 gaagaagccaagaagaagcttctgaaggacgcggaggccctgagccagcgcctggaggag 951

Qy     493 GCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGAT 552
           |   ||  || |  ||  ||| | ||    | |||   |||| |||||  || |||
Db     952 aaggcactggcgtatgacaaactggagaagaccaagaaccgcctgcagcaggagctggac 1011

Qy     553 GAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAG 612
           ||   ||      |  | |||  |    | ||   ||   | |||  || | |  | | ||
Db    1012 gacctcacggtggacctggaccaccagcgccaggtcgcctccaacttggagaagaagcag 1071

Qy     613 CAAA 616
           | |
Db    1072 aaga 1075


RESULT   8
AAX83006/c
ID   AAX83006 standard; DNA; 16442 BP.
XX
AC   AAX83006;
XX
DT   31-AUG-1999  (first entry)
XX
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```
DE   Partial mouse WRN genomic sequence #2.
XX
KW   Mouse; WRN; Werner's syndrome; detection; diagnosis; autosomal;
KW   recessive disorder; phenotype; ss.
XX
OS   Mus musculus.
XX
PN   WO9724435-A1.
XX
PD   10-JUL-1997.
XX
PF   30-DEC-1996;   96WO-US20785.
XX
PR   12-APR-1996;   96US-0632175.
PR   29-DEC-1995;   95US-0009409.
PR   29-DEC-1995;   95US-0580539.
PR   30-JAN-1996;   96US-0010835.
PR   30-JAN-1996;   96US-0594242.
XX
PA   (DARW-) DARWIN MOLECULAR CORP.
PA   (OSHI/) OSHIMA J.
XX
PI   Fu Y, Mulligan J, Oshima J, Schellenberg GD, Yu C;
XX
DR   WPI; 1997-363671/33.
XX
PT   Isolated nucleic acid molecule encoding the WRN gene product -
PT   useful for detection and treatment of Werner's syndrome, and related
PT   diseases
XX
PS   Claim 1; Fig 7; 153pp; English.
XX
CC   This sequence represents a fragment of the genomic sequence containing
CC   the coding region for the mouse WRN gene (AAX83004). The corresponding
CC   human gene (AAX83001) encodes a protein related to Werner's syndrome.
CC   The products can be used for the detection and treatment of Werner's
CC   syndrome (WS), an autosomal recessive disorder with a complex phenotype,
CC   as well as related diseases.
XX
SQ   Sequence 16442 BP; 4392 A; 2975 C; 3408 G; 5665 T; 2 other;


  Query Match             2.2%;  Score 44.4;  DB 18;  Length 16442;
  Best Local Similarity   46.2%;  Pred. No. 0.22;
  Matches  147;  Conservative    0;  Mismatches  171;  Indels    0;  Gaps    0;

Qy    535 CTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGC 594
          | |||| ||  |||||| ||    |  | |    |||| |||  ||        ||
Db  16438 CAGGAGGAGGAGCAGGAGCAGGAGGAGGAGGAGGAGGAGCAGGAGCAGGAGGAGGAGGAG 16379

Qy    595 AAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAG 654
           ||  | |      | || |    ||||     |   ||   |||      |||| ||||
Db  16378 GAGCAGGAGCAGGAGCAGGAGGAGGAGCAGGAGCAGGAGGAGCAGGAGGAGGAGGAGGAG 16319

Qy    655 GAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGC 714
           ||  |   |  ||   ||  | ||  |||   | || | || ||| ||  | | |
Db  16318 CAGGAGGAGCAGGAGGAGGAGGAGGAGCAGGAGGAGGAGCAGGAGCAGGAGGAGGAGGAG 16259

Qy    715 GTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGGGGAACTG 774
          |       || | ||| | ||| |   | |||| |    | |||     | |||   |
Db  16258 CAGGAGGAGCAGGAGGAGGAGGAGCAGGAGCAGGAGGAGGAGGAGGAGGAGGAGGAGTAG 16199

Qy    775 GCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTGAAGACTCTCAACACT 834
            || | |  ||||||| |   |  |      | ||  |||  |||||     || |
Db  16198 AAGGAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAG 16139

Qy    835 GAGCTGGATCAGGCCAAG 852
           ||  | |  ||   |||
Db  16138 AAGAAGAAGAAGAAGAAG 16121


RESULT   9
AAC46364
ID   AAC46364 standard; DNA; 744 BP.
XX
AC   AAC46364;
XX
DT   18-OCT-2000  (first entry)
XX
DE   Arabidopsis thaliana DNA fragment SEQ ID NO: 49870.
XX
KW   Hybridisation assay; genetic mapping; gene expression control;
KW   protein identification; signal transduction pathway;
KW   metabolic pathway; promoter; termination sequence; ss.
XX
OS   Arabidopsis thaliana.
XX
PN   EP1033405-A2.
XX
PD   06-SEP-2000.
XX
PF   25-FEB-2000; 2000EP-0301439.
XX
PR   25-FEB-1999;   99US-0121825.
PR   05-MAR-1999;   99US-0123180.
PR   09-MAR-1999;   99US-0123548.
PR   23-MAR-1999;   99US-0125788.
PR   25-MAR-1999;   99US-0126264.
PR   29-MAR-1999;   99US-0126785.
PR   01-APR-1999;   99US-0127462.
PR   06-APR-1999;   99US-0128234.
PR   08-APR-1999;   99US-0128714.
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PR   19-APR-1999;   99US-0130077.
PR   21-APR-1999;   99US-0130449.
PR   23-APR-1999;   99US-0130510.
PR   23-APR-1999;   99US-0130891.
PR   28-APR-1999;   99US-0131449.
PR   30-APR-1999;   99US-0132048.
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PR   04-MAY-1999;   99US-0132484.
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PR   01-JUN-1999;   99US-0137222.
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PR   04-JUN-1999;   99US-0137502.
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PR   10-JUN-1999;   99US-0138847.
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PR 30-JUN-1999; 99US-0141287.
PR 01-JUL-1999; 99US-0141842.
PR 01-JUL-1999; 99US-0142154.
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PR 06-JUL-1999; 99US-0142390.
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PR 02-AUG-1999; 99US-0146388.
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PR 27-AUG-1999; 99US-0151080.
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PR 22-OCT-1999; 99US-0160980.
PR 22-OCT-1999; 99US-0160981.
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PR 25-OCT-1999; 99US-0161404.
PR 25-OCT-1999; 99US-0161405.
PR 25-OCT-1999; 99US-0161406.
PR 26-OCT-1999; 99US-0161359.
PR 26-OCT-1999; 99US-0161360.
PR 26-OCT-1999; 99US-0161361.
PR 28-OCT-1999; 99US-0161920.
PR 28-OCT-1999; 99US-0161992.
PR 28-OCT-1999; 99US-0161993.
PR 29-OCT-1999; 99US-0162142.

Query Match 2.2%; Score 44; DB 21; Length 744;
Best Local Similarity 51.0%; Pred. No. 0.052;
Matches 104; Conservative 0; Mismatches 100; Indels 0; Gaps 0;

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Qy    542 AGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGA 601
          || ||  | | ||||  ||   |    | |||||  |   |  | || |     ||||||
Db    168 agtggaggaaagagaggaagagactgagagaggaagtgaagaggctgagacagaagatgg 227

Qy    602 AAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGA 661
          ||   | |||  ||    ||     ||  ||      |   | |  |||||  |||||
Db    228 aagagaaggaagaaggaaaggcgaaacaacacgagtgggaatgggtcgtggaacagatgt 287

Qy    662 TTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCC 721
            | ||| |  | ||| |  |   ||| ||||||  | |     |  || | |  |
Db    288 gtttagagagagcagtgagggaagaagctgtggagaggtggaagcagctctactttgcta 347

Qy    722 TCAAGAAAGAGTATGAGAATCTGA 745
          ||||||| |||  |||  |||| |
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Db    348 tcaagaatgagcttgatgatctca 371


RESULT 10
AAC38464
ID   AAC38464 standard; DNA; 746 BP.
XX
AC   AAC38464;
XX
DT   17-OCT-2000  (first entry)
XX
DE   Arabidopsis thaliana DNA fragment SEQ ID NO: 21066.
XX
KW   Hybridisation assay; genetic mapping; gene expression control;
KW   protein identification; signal transduction pathway;
KW   metabolic pathway; promoter; termination sequence; ss.
XX
OS   Arabidopsis thaliana.
XX
PN   EP1033405-A2.
XX
PD   06-SEP-2000.
XX
PF   25-FEB-2000; 2000EP-0301439.
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PR   25-FEB-1999;   99US-0121825.
PR   05-MAR-1999;   99US-0123180.
PR   09-MAR-1999;   99US-0123548.
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PR   25-MAR-1999;   99US-0126264.
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PR   23-APR-1999;   99US-0130510.
PR   23-APR-1999;   99US-0130891.
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PR   30-APR-1999;   99US-0132048.
PR   30-APR-1999;   99US-0132407.
PR   04-MAY-1999;   99US-0132484.
PR   05-MAY-1999;   99US-0132485.
PR   06-MAY-1999;   99US-0132486.
PR   06-MAY-1999;   99US-0132487.
PR   07-MAY-1999;   99US-0132863.
PR   11-MAY-1999;   99US-0134256.
PR   14-MAY-1999;   99US-0134218.
PR   14-MAY-1999;   99US-0134219.
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PR   18-MAY-1999;   99US-0134768.
PR   19-MAY-1999;   99US-0134941.
PR   20-MAY-1999;   99US-0135124.
PR   21-MAY-1999;   99US-0135353.
PR   24-MAY-1999;   99US-0135629.
PR   25-MAY-1999;   99US-0136021.
PR   27-MAY-1999;   99US-0136392.
PR   28-MAY-1999;   99US-0136782.
PR   01-JUN-1999;   99US-0137222.
PR   03-JUN-1999;   99US-0137528.
PR   04-JUN-1999;   99US-0137502.
PR   07-JUN-1999;   99US-0137724.
PR   08-JUN-1999;   99US-0138094.
PR   10-JUN-1999;   99US-0138540.
PR   10-JUN-1999;   99US-0138847.
PR   14-JUN-1999;   99US-0139119.
PR   16-JUN-1999;   99US-0139452.
PR   16-JUN-1999;   99US-0139453.
PR   17-JUN-1999;   99US-0139492.
PR   18-JUN-1999;   99US-0139454.
PR   18-JUN-1999;   99US-0139455.
PR   18-JUN-1999;   99US-0139456.
PR   18-JUN-1999;   99US-0139457.
PR   18-JUN-1999;   99US-0139458.
PR   18-JUN-1999;   99US-0139459.
PR   18-JUN-1999;   99US-0139460.
PR   18-JUN-1999;   99US-0139461.
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PR   18-JUN-1999;   99US-0139463.
PR   18-JUN-1999;   99US-0139750.
PR   18-JUN-1999;   99US-0139763.
PR   21-JUN-1999;   99US-0139817.
PR   22-JUN-1999;   99US-0139899.
PR   23-JUN-1999;   99US-0140353.
PR   23-JUN-1999;   99US-0140354.
PR   24-JUN-1999;   99US-0140695.
PR   28-JUN-1999;   99US-0140823.
PR   29-JUN-1999;   99US-0140991.
PR   30-JUN-1999;   99US-0141287.
PR   01-JUL-1999;   99US-0141842.
PR   01-JUL-1999;   99US-0142154.
PR   02-JUL-1999;   99US-0142055.
PR   06-JUL-1999;   99US-0142390.
PR   08-JUL-1999;   99US-0142803.
PR   09-JUL-1999;   99US-0142920.
PR   12-JUL-1999;   99US-0142977.
PR   13-JUL-1999;   99US-0143542.
PR   14-JUL-1999;   99US-0143624.
PR   15-JUL-1999;   99US-0144005.
PR   16-JUL-1999;   99US-0144085.
PR   16-JUL-1999;   99US-0144086.
PR   19-JUL-1999;   99US-0144325.
PR   19-JUL-1999;   99US-0144331.
PR   19-JUL-1999;   99US-0144332.
PR   19-JUL-1999;   99US-0144333.
PR   19-JUL-1999;   99US-0144334.
PR   19-JUL-1999;   99US-0144335.
PR   20-JUL-1999;   99US-0144352.
PR   20-JUL-1999;   99US-0144632.
PR   20-JUL-1999;   99US-0144884.
PR   21-JUL-1999;   99US-0144814.
PR   21-JUL-1999;   99US-0145086.
PR   21-JUL-1999;   99US-0145088.
PR   22-JUL-1999;   99US-0145085.
PR   22-JUL-1999;   99US-0145087.
PR   22-JUL-1999;   99US-0145089.
PR   22-JUL-1999;   99US-0145192.
PR   23-JUL-1999;   99US-0145145.
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PR   23-JUL-1999;   99US-0145224.
PR   26-JUL-1999;   99US-0145276.
PR   27-JUL-1999;   99US-0145913.
PR   27-JUL-1999;   99US-0145918.
PR   27-JUL-1999;   99US-0145919.
PR   28-JUL-1999;   99US-0145951.
PR   02-AUG-1999;   99US-0146386.
PR   02-AUG-1999;   99US-0146388.
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PR   03-AUG-1999;   99US-0147038.
PR   04-AUG-1999;   99US-0147204.
PR   04-AUG-1999;   99US-0147302.
PR   05-AUG-1999;   99US-0147192.
PR   05-AUG-1999;   99US-0147260.
PR   06-AUG-1999;   99US-0147303.
PR   06-AUG-1999;   99US-0147416.
PR   09-AUG-1999;   99US-0147493.
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PR   10-AUG-1999;   99US-0148171.
PR   11-AUG-1999;   99US-0148319.
PR   12-AUG-1999;   99US-0148341.
PR   13-AUG-1999;   99US-0148565.
PR   13-AUG-1999;   99US-0148684.
PR   16-AUG-1999;   99US-0149368.
PR   17-AUG-1999;   99US-0149175.
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PR 18-AUG-1999; 99US-0149426.
PR 20-AUG-1999; 99US-0149722.
PR 20-AUG-1999; 99US-0149723.
PR 20-AUG-1999; 99US-0149929.
PR 23-AUG-1999; 99US-0149902.
PR 23-AUG-1999; 99US-0149930.
PR 25-AUG-1999; 99US-0150566.
PR 26-AUG-1999; 99US-0150884.
PR 27-AUG-1999; 99US-0151065.
PR 27-AUG-1999; 99US-0151066.
PR 27-AUG-1999; 99US-0151080.
PR 30-AUG-1999; 99US-0151303.
PR 31-AUG-1999; 99US-0151438.
PR 01-SEP-1999; 99US-0151930.
PR 07-SEP-1999; 99US-0152363.
PR 10-SEP-1999; 99US-0153070.
PR 13-SEP-1999; 99US-0153758.
PR 15-SEP-1999; 99US-0154018.
PR 16-SEP-1999; 99US-0154039.
PR 20-SEP-1999; 99US-0154779.
PR 22-SEP-1999; 99US-0155139.
PR 23-SEP-1999; 99US-0155486.
PR 24-SEP-1999; 99US-0155659.
PR 28-SEP-1999; 99US-0156458.
PR 29-SEP-1999; 99US-0156596.
PR 04-OCT-1999; 99US-0157117.
PR 05-OCT-1999; 99US-0157753.
PR 06-OCT-1999; 99US-0157865.
PR 07-OCT-1999; 99US-0158029.
PR 08-OCT-1999; 99US-0158232.
PR 12-OCT-1999; 99US-0158369.
PR 13-OCT-1999; 99US-0159293.
PR 13-OCT-1999; 99US-0159294.
PR 13-OCT-1999; 99US-0159295.
PR 14-OCT-1999; 99US-0159329.
PR 14-OCT-1999; 99US-0159330.
PR 14-OCT-1999; 99US-0159331.
PR 14-OCT-1999; 99US-0159637.
PR 14-OCT-1999; 99US-0159638.
PR 18-OCT-1999; 99US-0159584.
PR 21-OCT-1999; 99US-0160741.
PR 21-OCT-1999; 99US-0160767.
PR 21-OCT-1999; 99US-0160768.
PR 21-OCT-1999; 99US-0160770.
PR 21-OCT-1999; 99US-0160814.
PR 21-OCT-1999; 99US-0160815.
PR 22-OCT-1999; 99US-0160980.
PR 22-OCT-1999; 99US-0160981.
PR 22-OCT-1999; 99US-0160989.
PR 25-OCT-1999; 99US-0161404.
PR 25-OCT-1999; 99US-0161405.
PR 25-OCT-1999; 99US-0161406.
PR 26-OCT-1999; 99US-0161359.
PR 26-OCT-1999; 99US-0161360.
PR 26-OCT-1999; 99US-0161361.
PR 28-OCT-1999; 99US-0161920.
PR 28-OCT-1999; 99US-0161992.
PR 28-OCT-1999; 99US-0161993.
PR 29-OCT-1999; 99US-0162142.

Query Match 2.2%; Score 44; DB 21; Length 746;
Best Local Similarity 51.0%; Pred. No. 0.053;
Matches 104; Conservative 0; Mismatches 100; Indels 0; Gaps 0;

Qy 542 AGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGA 601
Db 168 agtggaggaaagagaggaagagactgagagaggaagtgaagaggctgagacagaagatgg 227

Qy 602 AAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGA 661
Db 228 aagagaaggaagaaggaaaggcgaaacaacacgagtgggaatgggtcgtggaacagatgt 287

Qy 662 TTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCC 721
Db 288 gtttagagagagcagtgagggaagaagctgtggagaggtggaagcagctctactttgcta 347

Qy 722 TCAAGAAAGAGTATGAGAATCTGA 745
Db 348 tcaagaatgagcttgatgatctca 371

RESULT 11
AAI58369
ID AAI58369 standard; cDNA; 7453 BP.
XX
AC AAI58369;
XX
DT 22-OCT-2001 (first entry)
XX
DE Human polynucleotide SEQ ID NO 572.
XX
KW Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
KW peripheral nervous system; neuropathy; central nervous system; CNS;
KW Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;
KW amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
KW chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
KW leukaemia; ss.
XX
OS Homo sapiens.
XX
PN WO200153312-A1.
XX
PD 26-JUL-2001.
XX
PF 26-DEC-2000; 2000WO-US34263.
XX
PR 21-JAN-2000; 2000US-0488725.
PR 25-APR-2000; 2000US-0552317.
PR 09-JUL-2000; 2000US-0598042.
PR 19-JUL-2000; 2000US-0620312.
PR 03-AUG-2000; 2000US-0653450.
PR 14-SEP-2000; 2000US-0662191.
PR 19-OCT-2000; 2000US-0693036.
PR 29-NOV-2000; 2000US-0727344.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Tang YT, Liu C, Asundi V, Chen R, Ma Y, Qian XB, Ren F, Wang D;
PI Wang J, Wang Z, Wehrman T, Xu C, Xue AJ, Yang Y, Zhang J;
PI Zhao QA, Zhou P, Goodrich R, Drmanac RT;
XX
DR WPI; 2001-442253/47.
DR P-PSDB; AAM39213.
XX
PT Novel nucleic acids and polypeptides, useful for treating disorders
PT such as central nervous system injuries - .
XX
PS Claim 1; SEQ ID NO 572; 10078pp; English.
XX
CC The invention relates to human nucleic acids (AAI57798-AAI61369) and
CC the encoded polypeptides (AAM38642-AAM42213) with nootropic,
CC immunosuppressant and cytostatic activity. The polynucleotides are useful
CC in gene therapy. A composition containing a polypeptide or polynucleotide
CC of the invention may be used to treat diseases of the peripheral nervous
CC system, such as peripheral nervous injuries, peripheral neuropathy and
CC localised neuropathies and central nervous system diseases, such as
CC Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic
CC lateral sclerosis, and Shy-Drager Syndrome. Other uses include the
CC utilisation of the activities such as: Immune system suppression,
CC Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic
CC and thrombolytic activity, cancer diagnosis and therapy, drug screening,
CC assays for receptor activity, arthritis and inflammation, leukaemias and
CC C.N.S disorders.
CC Note: The sequence data for this patent did not form part of the printed
CC specification.
XX

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SQ   Sequence 7453 BP; 2253 A; 1656 C; 1983 G; 1561 T; 0 other;


  Query Match             2.2%;  Score 43.8;  DB 22;  Length 7453;
  Best Local Similarity   46.5%;  Pred. No. 0.21;
  Matches  141;  Conservative    0;  Mismatches  162;  Indels    0;  Gaps    0;

Qy     313 CAGGAAGAGGAGAATGTCTTGGATGCAGAATTCTTAAAGAATGAACTGGACAGCGTCAAA 372
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Db    4051 cagcaggaggaggaggaggaggccaggaagaacctggagaagcaagtgctggccctgcag 4110

Qy     373 GCTCAGCTTTCCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACTCTA 432
           | ||| |  |  | |   | | | |   |   |||  || ||  |  || || | |||
Db    4111 tcccagttggctgataccaagaagaaagtagatgacgacctgggaacaattgaaagtctg 4170

Qy     433 CGGGACACCCTGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAACAAG 492
             ||  ||  | |  | |           || |||| ||||     |   | |  |  ||
Db    4171 gaagaagccaagaagaagcttctgaaggacgcggaggccctgagccagcgcctggaggag 4230

Qy     493 GCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGAT 552
             |  ||  || |  ||  ||| | ||    | |||   |||| ||||| || |||
Db    4231 aaggcactggcgtatgacaaactggagaagaccaagaaccgcctgcagcaggagctggac 4290

Qy     553 GAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAG 612
           ||   ||     |  | |||  |    | ||   ||   | |||  || | |  | | |
Db    4291 gacctcacggtggacctggaccaccagcgccaggtcgcctccaacttggagaagaagcaa 4350

Qy     613 CAA 615
           ||
Db    4351 gaa 4353


RESULT  12
AAI58370
ID   AAI58370 standard; cDNA; 7501 BP.
XX
AC   AAI58370;
XX
DT   22-OCT-2001  (first entry)
XX
DE   Human polynucleotide SEQ ID NO 573.
XX
KW   Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
KW   peripheral nervous system; neuropathy; central nervous system; CNS;
KW   Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;
KW   amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
KW   chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
KW   leukaemia; ss.
XX
OS   Homo sapiens.
XX
PN   WO200153312-A1.
XX
PD   26-JUL-2001.
XX
PF   26-DEC-2000; 2000WO-US34263.
XX
PR   21-JAN-2000; 2000US-0488725.
PR   25-APR-2000; 2000US-0552317.
PR   09-JUL-2000; 2000US-0598042.
PR   19-JUL-2000; 2000US-0620312.
PR   03-AUG-2000; 2000US-0653450.
PR   14-SEP-2000; 2000US-0662191.
PR   19-OCT-2000; 2000US-0693036.
PR   29-NOV-2000; 2000US-0727344.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Asundi V,  Chen R,  Ma Y,  Qian XB,  Ren F,  Wang D;
PI   Wang J,  Wang Z,  Wehrman T,  Xu C,  Xue AJ,  Yang Y,  Zhang J;
PI   Zhao QA,  Zhou P,  Goodrich R,  Drmanac RT;
XX
DR   WPI; 2001-442253/47.
DR   P-PSDB; AAM39214.
XX
PT   Novel nucleic acids and polypeptides, useful for treating disorders
PT   such as central nervous system injuries -
XX
PS   Claim 1; SEQ ID NO 573; 10078pp; English.
XX
CC   The invention relates to human nucleic acids (AAI57798-AAI61369) and
CC   the encoded polypeptides (AAM38642-AAM42213) with nootropic,
CC   immunosuppressant and cytostatic activity. The polynucleotides are useful
CC   in gene therapy. A composition containing a polypeptide or polynucleotide
CC   of the invention may be used to treat diseases of the peripheral nervous
CC   system, such as peripheral nervous injuries, peripheral neuropathy and
CC   localised neuropathies and central nervous system diseases, such as
CC   Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic
CC   lateral sclerosis, and Shy-Drager Syndrome. Other uses include the
CC   utilisation of the activities such as: Immune system suppression,
CC   Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic
CC   and thrombolytic activity, cancer diagnosis and therapy, drug screening,
CC   assays for receptor activity, arthritis and inflammation, leukaemias and
CC   C.N.S disorders.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification.
XX
SQ   Sequence 7501 BP; 2268 A; 1668 C; 1994 G; 1571 T; 0 other;


  Query Match             2.2%;  Score 43.8;  DB 22;  Length 7501;
  Best Local Similarity   46.5%;  Pred. No. 0.21;
  Matches  141;  Conservative    0;  Mismatches  162;  Indels    0;  Gaps    0;

Qy     313 CAGGAAGAGGAGAATGTCTTGGATGCAGAATTCTTAAAGAATGAACTGGACAGCGTCAAA 372
           ||| | |||||| | |    ||       |   | |  ||||  || ||     | |  |
Db    4099 cagcaggaggaggaggaggaggccaggaagaacctggagaagcaagtgctggccctgcag 4158

Qy     373 GCTCAGCTTTCCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACTCTA 432
           | ||| |  |  | |   | | | |   |   |||  || ||  |  || || | |||
Db    4159 tcccagttggctgataccaagaagaaagtagatgacgacctgggaacaattgaaagtctg 4218

Qy     433 CGGGACACCCTGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAACAAG 492
             ||  ||  | |  | |           || |||| ||||     |   | |  |  ||
Db    4219 gaagaagccaagaagaagcttctgaaggacgcggaggccctgagccagcgcctggaggag 4278

Qy     493 GCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGAT 552
             |  ||  || |  ||  ||| | ||    | |||   |||| ||||| || |||
Db    4279 aaggcactggcgtatgacaaactggagaagaccaagaaccgcctgcagcaggagctggac 4338

Qy     553 GAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAG 612
           ||   ||     |  | |||  |    | ||   ||   | |||  || | |  | | |
Db    4339 gacctcacggtggacctggaccaccagcgccaggtcgcctccaacttggagaagaagcaa 4398

Qy     613 CAA 615
           ||
Db    4399 gaa 4401


RESULT  13
AAI60155
ID   AAI60155 standard; cDNA; 7741 BP.
XX
AC   AAI60155;
XX
DT   22-OCT-2001  (first entry)
XX
DE   Human polynucleotide SEQ ID NO 4144.
XX
KW   Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
KW   peripheral nervous system; neuropathy; central nervous system; CNS;
KW   Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;
KW   amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
KW   chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
KW   leukaemia; ss.
XX
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```
OS   Homo sapiens.
XX
PN   WO200153312-A1.
XX
PD   26-JUL-2001.
XX
PF   26-DEC-2000; 2000WO-US34263.
XX
PR   21-JAN-2000; 2000US-0488725.
PR   25-APR-2000; 2000US-0552317.
PR   09-JUL-2000; 2000US-0598042.
PR   19-JUL-2000; 2000US-0620312.
PR   03-AUG-2000; 2000US-0653450.
PR   14-SEP-2000; 2000US-0662191.
PR   19-OCT-2000; 2000US-0693036.
PR   29-NOV-2000; 2000US-0727344.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Asundi V,  Chen R,  Ma Y,  Qian XB,  Ren F,  Wang D;
PI   Wang J,  Wang Z,  Wehrman T,  Xu C,  Xue AJ,  Yang Y,  Zhang J;
PI   Zhao QA,  Zhou P,  Goodrich R,  Drmanac RT;
XX
DR   WPI; 2001-442253/47.
DR   P-PSDB; AAM40999.
XX
PT   Novel nucleic acids and polypeptides, useful for treating disorders
PT   such as central nervous system injuries -
XX
PS   Claim 1; SEQ ID NO 4144; 10078pp; English.
XX
CC   The invention relates to human nucleic acids (AAI57798-AAI61369) and
CC   the encoded polypeptides (AAM38642-AAM42213) with nootropic,
CC   immunosuppressant and cytostatic activity. The polynucleotides are useful
CC   in gene therapy. A composition containing a polypeptide or polynucleotide
CC   of the invention may be used to treat diseases of the peripheral nervous
CC   system, such as peripheral nervous injuries, peripheral neuropathy and
CC   localised neuropathies and central nervous system diseases, such as
CC   Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic
CC   lateral sclerosis, and Shy-Drager Syndrome. Other uses include the
CC   utilisation of the activities such as: Immune system suppression,
CC   Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic
CC   and thrombolytic activity, cancer diagnosis and therapy, drug screening,
CC   assays for receptor activity, arthritis and inflammation, leukaemias and
CC   C.N.S disorders.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification.
XX
SQ   Sequence 7741 BP; 2303 A; 1751 C; 2080 G; 1606 T; 1 other;


  Query Match             2.2%;  Score 43.8;  DB 22;  Length 7741;
  Best Local Similarity   46.5%;  Pred. No. 0.21;
  Matches  141;  Conservative    0;  Mismatches  162;  Indels    0;  Gaps    0;

Qy    313 CAGGAAGAGGAGAATGTCTTGGATGCAGAATTCTTAAAGAATGAACTGGACAGCGTCAAA 372
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Db   4202 cagcaggaggaggaggaggccaggaagaacctggagaagcaagtgctggccctgcag 4261

Qy    373 GCTCAGCTTTCCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACTCTA 432
           | ||| |  |  | |   | | | |   |   |||  || ||  |  || || | |||
Db   4262 tcccagttggctgataccaagaagaaagtagatgacgacctgggaacaattgaaagtctg 4321

Qy    433 CGGGACACCCTGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAACAAG 492
             ||  ||  | |  | |          || |||| ||||     |   | |  |  ||
Db   4322 gaagaagccaagaagaagcttctgaaggacgcggaggccctgagccagcgcctggaggag 4381

Qy    493 GCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGAT 552
             |   ||  || |  ||  ||| | ||    | |||   |||| |||||  || |||
Db   4382 aaggcactggcgtatgacaaactggagaagaccaagaaccgcctgcagcaggagctggac 4441

Qy    553 GAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAG 612
          ||   ||     |  | |||  |    | ||   ||   | |||  || | |  | | |
Db   4442 gacctcacggtggacctggaccaccagcgccaggtcgcctccaacttggagaagaagcaa 4501

Qy    613 CAA 615
            ||
Db   4502 gaa 4504


RESULT  14
AAI60156
ID   AAI60156 standard; cDNA; 7741 BP.
XX
AC   AAI60156;
XX
DT   22-OCT-2001  (first entry)
XX
DE   Human polynucleotide SEQ ID NO 4145.
XX
KW   Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
KW   peripheral nervous system; neuropathy; central nervous system; CNS;
KW   Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;
KW   amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
KW   chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
KW   leukaemia; ss.
XX
OS   Homo sapiens.
XX
PN   WO200153312-A1.
XX
PD   26-JUL-2001.
XX
PF   26-DEC-2000; 2000WO-US34263.
XX
PR   21-JAN-2000; 2000US-0488725.
PR   25-APR-2000; 2000US-0552317.
PR   09-JUL-2000; 2000US-0598042.
PR   19-JUL-2000; 2000US-0620312.
PR   03-AUG-2000; 2000US-0653450.
PR   14-SEP-2000; 2000US-0662191.
PR   19-OCT-2000; 2000US-0693036.
PR   29-NOV-2000; 2000US-0727344.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Asundi V,  Chen R,  Ma Y,  Qian XB,  Ren F,  Wang D;
PI   Wang J,  Wang Z,  Wehrman T,  Xu C,  Xue AJ,  Yang Y,  Zhang J;
PI   Zhao QA,  Zhou P,  Goodrich R,  Drmanac RT;
XX
DR   WPI; 2001-442253/47.
DR   P-PSDB; AAM41000.
XX
PT   Novel nucleic acids and polypeptides, useful for treating disorders
PT   such as central nervous system injuries -
XX
PS   Claim 1; SEQ ID NO 4145; 10078pp; English.
XX
CC   The invention relates to human nucleic acids (AAI57798-AAI61369) and
CC   the encoded polypeptides (AAM38642-AAM42213) with nootropic,
CC   immunosuppressant and cytostatic activity. The polynucleotides are useful
CC   in gene therapy. A composition containing a polypeptide or polynucleotide
CC   of the invention may be used to treat diseases of the peripheral nervous
CC   system, such as peripheral nervous injuries, peripheral neuropathy and
CC   localised neuropathies and central nervous system diseases, such as
CC   Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic
CC   lateral sclerosis, and Shy-Drager Syndrome. Other uses include the
CC   utilisation of the activities such as: Immune system suppression,
CC   Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic
CC   and thrombolytic activity, cancer diagnosis and therapy, drug screening,
CC   assays for receptor activity, arthritis and inflammation, leukaemias and
CC   C.N.S disorders.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification.
XX
SQ   Sequence 7741 BP; 2303 A; 1751 C; 2080 G; 1606 T; 1 other;
```

```
  Query Match             2.2%;  Score 43.8;  DB 22;  Length 7741;
  Best Local Similarity   46.5%;  Pred. No. 0.21;
  Matches  141;  Conservative    0;  Mismatches  162;  Indels    0;  Gaps    0;

Qy     313 CAGGAAGAGGAGAATGTCTTGGATGCAGAATTCTTAAAGAATGAACTGGACAGCGTCAAA 372
           ||| | |||||| | |    ||       |   | |  ||||  || ||     | |  |
Db    4202 cagcaggaggaggaggaggaggccaggaagaacctggagaagcaagtgctggccctgcag 4261

Qy     373 GCTCAGCTTTCCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACTCTA 432
            | ||| |  |  | |   | | | |   |   ||| || ||  |  || || | |||
Db    4262 tcccagttggctgataccaagaagaaagtagatgacgacctgggaacaattgaaagtctg 4321

Qy     433 CGGGACACCCTGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAACAAG 492
             ||  ||  | |  | |          || |||| ||||     |   | |  |  ||
Db    4322 gaagaagccaagaagaagcttctgaaggacgcggaggccctgagccagcgcctggaggag 4381

Qy     493 GCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGAT 552
             |   ||  || |  ||  ||| | ||    | |||   |||| |||||  || |||
Db    4382 aaggcactggcgtatgacaaactggagaagaccaagaaccgcctgcagcaggagctggac 4441

Qy     553 GAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAG 612
           ||   ||     |  | |||  |    | ||   ||   | |||  || | |  | | |
Db    4442 gacctcacggtggacctggaccaccagcgccaggtcgcctccaacttggagaagaagcaa 4501

Qy     613 CAA 615
           ||
Db    4502 gaa 4504


RESULT  15
AAK82155
ID   AAK82155 standard; DNA; 3229 BP.
XX
AC   AAK82155;
XX
DT   07-NOV-2001  (first entry)
XX
DE   Human immune/haematopoietic antigen genomic sequence SEQ ID NO:36967.
XX
KW   Human; immune; haematopoietic; immune/haematopoietic antigen; cancer;
KW   cytostatic; gene therapy; vaccine; metastasis; ds.
XX
OS   Homo sapiens.
XX
PN   WO200157182-A2.
XX
PD   09-AUG-2001.
XX
PF   17-JAN-2001; 2001WO-US01354.
XX
PR   31-JAN-2000; 2000US-0179065.
PR   04-FEB-2000; 2000US-0180628.
PR   24-FEB-2000; 2000US-0184664.
PR   02-MAR-2000; 2000US-0186350.
PR   16-MAR-2000; 2000US-0189874.
PR   17-MAR-2000; 2000US-0190076.
PR   18-APR-2000; 2000US-0198123.
PR   19-MAY-2000; 2000US-0205515.
PR   07-JUN-2000; 2000US-0209467.
PR   28-JUN-2000; 2000US-0214886.
PR   30-JUN-2000; 2000US-0215135.
PR   07-JUL-2000; 2000US-0216647.
PR   07-JUL-2000; 2000US-0216880.
PR   11-JUL-2000; 2000US-0217487.
PR   11-JUL-2000; 2000US-0217496.
PR   14-JUL-2000; 2000US-0218290.
PR   26-JUL-2000; 2000US-0220963.
PR   26-JUL-2000; 2000US-0220964.
PR   14-AUG-2000; 2000US-0224518.
PR   14-AUG-2000; 2000US-0224519.
PR   14-AUG-2000; 2000US-0225213.
PR   14-AUG-2000; 2000US-0225214.
PR   14-AUG-2000; 2000US-0225266.
PR   14-AUG-2000; 2000US-0225267.
PR   14-AUG-2000; 2000US-0225268.
PR   14-AUG-2000; 2000US-0225270.
PR   14-AUG-2000; 2000US-0225447.
PR   14-AUG-2000; 2000US-0225757.
PR   14-AUG-2000; 2000US-0225758.
PR   14-AUG-2000; 2000US-0225759.
PR   18-AUG-2000; 2000US-0226279.
PR   22-AUG-2000; 2000US-0226681.
PR   22-AUG-2000; 2000US-0226868.
PR   22-AUG-2000; 2000US-0227182.
PR   23-AUG-2000; 2000US-0227009.
PR   30-AUG-2000; 2000US-0228924.
PR   01-SEP-2000; 2000US-0229287.
PR   01-SEP-2000; 2000US-0229343.
PR   01-SEP-2000; 2000US-0229344.
PR   01-SEP-2000; 2000US-0229345.
PR   05-SEP-2000; 2000US-0229509.
PR   05-SEP-2000; 2000US-0229513.
PR   06-SEP-2000; 2000US-0230437.
PR   06-SEP-2000; 2000US-0230438.
PR   08-SEP-2000; 2000US-0231242.
PR   08-SEP-2000; 2000US-0231243.
PR   08-SEP-2000; 2000US-0231244.
PR   08-SEP-2000; 2000US-0231413.
PR   08-SEP-2000; 2000US-0231414.
PR   08-SEP-2000; 2000US-0232080.
PR   08-SEP-2000; 2000US-0232081.
PR   12-SEP-2000; 2000US-0231968.
PR   14-SEP-2000; 2000US-0232397.
PR   14-SEP-2000; 2000US-0232398.
PR   14-SEP-2000; 2000US-0232399.
PR   14-SEP-2000; 2000US-0232400.
PR   14-SEP-2000; 2000US-0232401.
PR   14-SEP-2000; 2000US-0233063.
PR   14-SEP-2000; 2000US-0233064.
PR   14-SEP-2000; 2000US-0233065.
PR   21-SEP-2000; 2000US-0234223.
PR   21-SEP-2000; 2000US-0234274.
PR   25-SEP-2000; 2000US-0234997.
PR   25-SEP-2000; 2000US-0234998.
PR   26-SEP-2000; 2000US-0235484.
PR   27-SEP-2000; 2000US-0235834.
PR   27-SEP-2000; 2000US-0235836.
PR   29-SEP-2000; 2000US-0236327.
PR   29-SEP-2000; 2000US-0236367.
PR   29-SEP-2000; 2000US-0236368.
PR   29-SEP-2000; 2000US-0236369.
PR   29-SEP-2000; 2000US-0236370.
PR   02-OCT-2000; 2000US-0236802.
PR   02-OCT-2000; 2000US-0237037.
PR   02-OCT-2000; 2000US-0237038.
PR   02-OCT-2000; 2000US-0237039.
PR   02-OCT-2000; 2000US-0237040.
PR   13-OCT-2000; 2000US-0239935.
PR   13-OCT-2000; 2000US-0239937.
PR   20-OCT-2000; 2000US-0240960.
PR   20-OCT-2000; 2000US-0241221.
PR   20-OCT-2000; 2000US-0241785.
PR   20-OCT-2000; 2000US-0241786.
PR   20-OCT-2000; 2000US-0241787.
PR   20-OCT-2000; 2000US-0241808.
PR   20-OCT-2000; 2000US-0241809.
PR   20-OCT-2000; 2000US-0241826.
PR   01-NOV-2000; 2000US-0244617.
PR   08-NOV-2000; 2000US-0246474.
PR   08-NOV-2000; 2000US-0246475.
PR   08-NOV-2000; 2000US-0246476.
PR   08-NOV-2000; 2000US-0246477.
PR   08-NOV-2000; 2000US-0246478.
PR   08-NOV-2000; 2000US-0246523.
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PR   08-NOV-2000; 2000US-0246524.
PR   08-NOV-2000; 2000US-0246525.
PR   08-NOV-2000; 2000US-0246526.
PR   08-NOV-2000; 2000US-0246527.
PR   08-NOV-2000; 2000US-0246528.
PR   08-NOV-2000; 2000US-0246532.
PR   08-NOV-2000; 2000US-0246609.
PR   08-NOV-2000; 2000US-0246610.
PR   08-NOV-2000; 2000US-0246611.
PR   08-NOV-2000; 2000US-0246613.
PR   17-NOV-2000; 2000US-0249207.
PR   17-NOV-2000; 2000US-0249208.
PR   17-NOV-2000; 2000US-0249209.
PR   17-NOV-2000; 2000US-0249210.
PR   17-NOV-2000; 2000US-0249211.
PR   17-NOV-2000; 2000US-0249212.
PR   17-NOV-2000; 2000US-0249213.
PR   17-NOV-2000; 2000US-0249214.
PR   17-NOV-2000; 2000US-0249215.
PR   17-NOV-2000; 2000US-0249216.
PR   17-NOV-2000; 2000US-0249217.
PR   17-NOV-2000; 2000US-0249218.
PR   17-NOV-2000; 2000US-0249244.
PR   17-NOV-2000; 2000US-0249245.
PR   17-NOV-2000; 2000US-0249264.
PR   17-NOV-2000; 2000US-0249265.
PR   17-NOV-2000; 2000US-0249297.
PR   17-NOV-2000; 2000US-0249299.
PR   17-NOV-2000; 2000US-0249300.
PR   01-DEC-2000; 2000US-0250160.
PR   01-DEC-2000; 2000US-0250391.
PR   05-DEC-2000; 2000US-0251030.
PR   05-DEC-2000; 2000US-0251988.
PR   05-DEC-2000; 2000US-0256719.
PR   06-DEC-2000; 2000US-0251479.
PR   08-DEC-2000; 2000US-0251856.
PR   08-DEC-2000; 2000US-0251868.
PR   08-DEC-2000; 2000US-0251869.
PR   08-DEC-2000; 2000US-0251989.
PR   08-DEC-2000; 2000US-0251990.
PR   11-DEC-2000; 2000US-0254097.
PR   05-JAN-2001; 2001US-0259678.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Rosen CA,  Barash SC,  Ruben SM;
XX
DR   WPI; 2001-483426/52.
XX
PT   Nucleic acids encoding human immune/hematopoietic antigen polypeptides,
PT   useful for preventing, diagnosing and/or treating cancers and
PT   metastasis -
XX
PS   Disclosure; SEQ ID NO 36967; 3071pp + Sequence Listing; English.
XX
CC   AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I)
CC   amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic
CC   activity, and can be used in gene therapy and vaccine production. (I)
CC   proteins and polynucleotides may be used in the prevention, diagnosis and
CC   treatment of diseases associated with inappropriate (I) expression. For
CC   example, they may be used to treat disorders associated with decreased
CC   expression by rectifying mutations or deletions in a patient's genome
CC   that affect the activity of (I) by expressing inactive proteins or to
CC   supplement the patients own production of (I). Additionally, (I)
CC   polynucleotides may be used to produce the secreted (I), by inserting
CC   the nucleic acids into a host cell and culturing the cell to express the
CC   protein. (I) proteins and polynucleotides may be used to prevent,
CC   diagnose and treat immune/haematopoietic-related diseases, especially
CC   cancers and cancer metastases of haematopoietic-derived cells. AAK64703
CC   to AAK87694 represent human immune/haematopoietic antigen genomic
CC   sequences from the present invention. AAK54942 to AAK54950 and AAM82169
CC   represent sequences used in the exemplification of the present invention.
XX
SQ   Sequence 3229 BP; 830 A; 837 C; 1045 G; 517 T; 0 other;


  Query Match             2.2%;  Score 43.2;  DB 22;  Length 3229;
  Best Local Similarity   48.4%;  Pred. No. 0.2;
  Matches  151;  Conservative    0;  Mismatches  158;  Indels    3;  Gaps    1;

Qy     544 CGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAA 603
           | |  |||||||  |   ||    |||||||||    |   ||| | | |  ||| |
Db      97 caggcggatgaggtcttgcagctgcgggaggagctggaggcactgaggcggcagaagggc 156

Qy     604 ACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGATT 663
            ||  ||||  |   | ||||||| || |||   |      | |   |||  ||   ||
Db     157 gcccgggaggcagaggtgctcctcctgcagcagcgtgtggccgccctggctgaagagaag 216

Qy     664 CGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCC--- 720
           |      |   | |       ||| |   |||  | ||    || |    |   ||
Db     217 agccgggcgcaggagaaggtcacagagaaagaggtggtgaaactgcagaatgaccccag 276

Qy     721 CTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGGGGAACTGGCTGAC 780
           ||  ||  ||||||  || | ||| |||| |  |   ||  |   |   | ||    ||
Db     277 ctggaggcagagtaccagcagctgcaggaggaccaccagcgccaggaccagctcagggag 336

Qy     781 AGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTGAAGACTCTCAACACTGAGCTG 840
           | |  | || ||||  ||   | |     |  |||| | ||||  ||  | |  |||| |
Db     337 aagcaggaggaggagctgagcttcctccaggacaagctcaagaggctagagaaggagcgg 396

Qy     841 GATCAGGCCAAG 852
           |    |||| ||
Db     397 gccatggccgag 408


RESULT  16
AAS69541
ID   AAS69541 standard; cDNA; 390 BP.
XX
AC   AAS69541;
XX
DT   13-FEB-2002  (first entry)
XX
DE   DNA encoding novel human diagnostic protein #5345.
XX
KW   Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW   food supplement; medical imaging; diagnostic; genetic disorder; ss.
XX
OS   Homo sapiens.
XX
PN   WO200175067-A2.
XX
PD   11-OCT-2001.
XX
PF   30-MAR-2001; 2001WO-US08631.
XX
PR   31-MAR-2000; 2000US-0540217.
PR   23-AUG-2000; 2000US-0649167.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Drmanac RT,  Liu C,  Tang YT;
XX
DR   WPI; 2001-639362/73.
DR   P-PSDB; ABG05354.
XX
PT   New isolated polynucleotide and encoded polypeptides, useful in
PT   diagnostics, forensics, gene mapping, identification of mutations
PT   responsible for genetic disorders or other traits and to assess
PT   biodiversity -
XX
PS   Claim 1; SEQ ID No 5345; 103pp; English.
XX
CC   The invention relates to isolated polynucleotide (I) and
CC   polypeptide (II) sequences. (I) is useful as hybridisation probes,
CC   polymerase chain reaction (PCR) primers, oligomers, and for chromosome
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CC   and gene mapping, and in recombinant production of (II). The
CC   polynucleotides are also used in diagnostics as expressed sequence tags
CC   for identifying expressed genes. (I) is useful in gene therapy techniques
CC   to restore normal activity of (II) or to treat disease states involving
CC   (II). (II) is useful for generating antibodies against it, detecting or
CC   quantitating a polypeptide in tissue, as molecular weight markers and as
CC   a food supplement. (II) and its binding partners are useful in medical
CC   imaging of sites expressing (II). (I) and (II) are useful for treating
CC   disorders involving aberrant protein expression or biological activity.
CC   The polypeptide and polynucleotide sequences have applications in
CC   diagnostics, forensics, gene mapping, identification of mutations
CC   responsible for genetic disorders or other traits to assess biodiversity
CC   and to produce other types of data and products dependent on DNA and
CC   amino acid sequences. AAS64197-AAS94564 represent novel human
CC   diagnostic coding sequences of the invention.
CC   Note: The sequence data for this patent did not appear in the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 390 BP; 191 A; 14 C; 149 G; 36 T; 0 other;


  Query Match             2.2%;  Score 42.8;  DB 23;  Length 390;
  Best Local Similarity   46.6%;  Pred. No. 0.081;
  Matches  137;  Conservative    0;  Mismatches  157;  Indels    0;  Gaps    0;

Qy    629 TCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAG 688
          | || |   |||  ||  || ||||||||  ||     ||   |   | ||   ||   |
Db     33 ttcaaacagagcagtcatagctggaggaggagaaggaggaggagaaggaggaggagaagg 92

Qy    689 CGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGG 748
          || |||| ||  ||  | | |    | |       ||||  || |  ||||   |||||
Db     93 aggaggagaaggaggaggaggaggaggagaagggaggagaagaaggagaagaaggagaagg 152

Qy    749 AAGCTCGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTA 808
          | |    | ||   |  | | |   ||   | | |  |||||| |   |  | |      |
Db    153 aggagaaggagaagagggagaagagggagaagaagaggaagaagaagaagaggaagaaga 212

Qy    809 GGAGCAAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAACTGAGGTCAG 868
          ||| |||  |||||     || |   ||  | |  ||   |||    |   || |
Db    213 agaggaagaagaagaggaagaagaagaagaagaagaagaggaagaagaagaagaagaaga 272

Qy    869 CCCAGAAGGACTTACAAAGTGCTGACCAGGAGATCACGAGCCTAAGAAAGAAGT 922
             |||||  |     | |       |  || |||  | ||     |  ||||| |
Db    273 agaagaagaagaagaagaagaagaagaagaagaagaagaagaagaagaagaaat 326


RESULT  17
AAT05868
ID   AAT05868 standard; DNA; 3399 BP.
XX
AC   AAT05868;
XX
DT   14-AUG-1996  (first entry)
XX
DE   Chicken leucocytozoan DNA encoding immunogenic protein for vaccines.
XX
KW   Chicken leucocytozoan; immunogen; recombinant vaccine; protection;
KW   immunisation; vaccination; ss.
XX
OS   Chicken leucocytozoan.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..3399
FT                   /*tag=  a
FT   misc_feature    1150..3218
FT                   /*tag=  b
FT                   /note= "fragment referred to in the claims, for
FT                          use as insert in a recombinant vaccine
FT                          against chicken leucocytozoan disease"
XX
PN   JP07284392-A.
XX
PD   31-OCT-1995.
XX
PF   19-APR-1994;   94JP-0080643.
XX
PR   19-APR-1994;   94JP-0080643.
XX
PA   (DOBU-) DOBUTSUYO SEIBUTSUGAKUTEKI SEIZAI KYOKAI.
PA   (KITA ) KITASATO KENKYUSHO SH.
XX
DR   WPI; 1996-006311/01.
DR   P-PSDB; AAR97866.
XX
PT   Chicken leucocytozoan immunogenic protein  - used in a recombinant
PT   vaccine against chicken leucocytozoan disease
XX
PS   Claim 6; Page 6-9; 35pp; Japanese.
XX
CC   AAT05868 encodes a chicken leucocytozoan immunogenic protein, this DNA
CC   or a fragment of it can be used in a recombinant vaccine to immunise
CC   against chicken leucocytozoan disease. The DNA is used in a vector
CC   and operatively linked to an expression regulatory sequence as in
CC   standard practice.
XX
SQ   Sequence 3399 BP; 1577 A; 508 C; 798 G; 516 T; 0 other;


  Query Match             2.2%;  Score 42.8;  DB 17;  Length 3399;
  Best Local Similarity   43.5%;  Pred. No. 0.26;
  Matches  194;  Conservative    0;  Mismatches  252;  Indels    0;  Gaps    0;

Qy    476 AGAACGCCTTAAACAAGGCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCC 535
          || |   | | || |||  | ||| |  ||     ||    ||| ||| ||| |||||  |
Db   2349 agtaacacatgaagaagaaaaagaagaagtaacacatgaagaagaaaaagaagaagtaac 2408

Qy    536 TGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCA 595
              | ||  | |  |  |||   ||||      | || ||    |   || || |   |
Db   2409 acatgaagaagaaaaagaagaagtaacacatgaagaagaagaaaaagtaacacatgaaga 2468

Qy    596 AGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGG 655
          |||  || |  | | | || ||  ||     |    |||   | |      ||  | ||
Db   2469 agaaaaagaagaagtaacacatgaagaagaaaaagaagaagtaacacatgaagaagaaga 2528

Qy    656 AGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCG 715
          | | |   |     | |     |  | ||| |    || || ||  |    |||
Db   2529 aaaagtaacacatgaagaagaagaaaaagtaacacatgaagaagaagaaaaagtaacata 2588

Qy    716 TGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGGGGAACTGG 775
          ||      |||||  || |  ||||   | |  |      ||||   | |  | |||
Db   2589 tgaagaagaagaagaagaagaagaaaaagtaacacatgaagaagaagaaaaagtaacaca 2648

Qy    776 CTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTGAAGACTCTCAACACTG 835
             | | |  ||| ||| |     ||      | ||  ||||   | |     || |
Db   2649 tgaagaagaagaaaaagtaacacatgaagaagaagaaaaagtaatacatgaagaagaaga 2708

Qy    836 AGCTGGATCAGGCCAAGTTAGAACTGAGGTCAGCCCAGAAGGACTTACAAAGTGCTGACC 895
          |   | |  ||   | |    |   || |       ||||| |     | |      |
Db   2709 aaaagaagaagatgaggaagaagaagaagaagaagaagaagaagaggaagaagaagaaga 2768

Qy    896 AGGAGATCACGAGCCTAAGAAAGAAG 921
          || |||| | ||     |  ||||||
Db   2769 agaagatgaggaagaggaagaagaag 2794


RESULT  18
ABI99537
ID   ABI99537 standard; cDNA; 1080 BP.
XX
AC   ABI99537;
XX
DT   07-MAR-2002  (first entry)
XX
DE   Mouse ischaemic condition related cDNA sequence SEQ ID NO:537.
XX
```

```
KW   Mouse; ischaemia; compressive ischaemia; occlusive ischaemia;
KW   vasospastic ischaemia; ischaemic condition; ischaemic disease; ss.
XX
OS   Mus musculus.
XX
PN   WO200188188-A2.
XX
PD   22-NOV-2001.
XX
PF   18-MAY-2001; 2001WO-JP04192.
XX
PR   18-MAY-2000; 2000JP-0145977.
XX
PA   (UYNI-) UNIV NIHON SCHOOL JURIDICAL PERSON.
XX
PI   Ishikawa K,  Asai S,  Takahashi Y,  Nagata T,  Ishii Y;
XX
DR   WPI; 2002-034733/04.
DR   P-PSDB; ABB57221.
XX
PT   Examining the ischemic condition (e.g. occlusive ischemia) by measuring
PT   expression levels of particular genes defined in the specification or
PT   by determining the expression profile of a gene group comprising these
PT   genes -
XX
PS   Claim 2; Page 1472-1473; 2690pp; English.
XX
CC   The present invention describes a method for examining ischaemic
CC   conditions, comprising measuring the expression levels of particular
CC   genes (I) in a test sample or determining the expression profile of a
CC   gene group in the sample comprising genes selected from (I). The method
CC   is useful for examining the ischaemic condition (e.g. compressive
CC   ischaemia, occlusive ischaemia or vasospastic ischaemia) by measuring
CC   expression levels of particular genes (ABI99202 to ABI99912, encoding
CC   the protein sequences in ABB57020 to ABB57374) or by determining the
CC   expression profile of a gene group comprising these genes. The
CC   expression levels or expression profiles produced by these genes are
CC   used as an indicator when screening for ischaemic condition-improving
CC   drugs or therapeutics for ischaemic diseases. ABI99913 and ABI99914
CC   represent PCR primers for a mouse ischaemic condition related sequence,
CC   which are used in the exemplification of the present invention.
XX
SQ   Sequence 1080 BP; 370 A; 191 C; 390 G; 129 T; 0 other;


  Query Match             2.1%;  Score 42.4;  DB 24;  Length 1080;
  Best Local Similarity   45.3%;  Pred. No. 0.18;
  Matches  154;  Conservative    0;  Mismatches  186;  Indels    0;  Gaps    0;

Qy     517 AAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAG 576
           ||||   ||  | ||     |||| ||  | |||| |||    |  | |    |||||||
Db     703 aaaaggaaggaggaggaggaggaggaggaggaggaggaggaggaggaggaggaggaggag 762

Qy     577 GCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGC 636
           |   |       |||   |||  |||    | |||| |     ||         ||
Db     763 gaggagaaggagaaggagaaggagaaggagaaggagaaggagaaggagaaggagaaggag 822

Qy     637 CAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAG 696
           ||      |||  |||| ||  ||      |   |   | |    ||   | |  ||||
Db     823 aaggagaaggagaaggagaaggagaaggagaaggagaaggagaaggagaaggagaaggag 882

Qy     697 CAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGG 756
           ||  |   | | |      |       |||| ||| | |||||   ||||||      |
Db     883 aaggagaaggagaaggagaaggagaaggagaaggagaaggagaaggagaaggagaaggag 942

Qy     757 AAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAG 816
           ||||  |  | | |   |    | | |  |||||||  |   |  |      | ||  |||
Db     943 aaggagaaggagaaggagaagaagaagaagaagaagaagaagaagaagaagaagaagaag 1002

Qy     817 TTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAG 856
             |||||     || |   ||  | |  ||   ||| |||
Db    1003 aagaagaagaagaagaagaagaagaagaagaagaagatag 1042
```

```
RESULT  19
AAN71065
ID   AAN71065 standard; DNA; 2000 BP.
XX
AC   AAN71065;
XX
DT   01-JAN-1980  (first entry)
XX
DE   Gene encoding Plasmodium cynomolgi sporozoite circumsporozoite
DE   protein.
XX
KW   Immunogen; vaccine; malaria; immunodominant epitope; DNA probe; ss.
XX
OS   Plasmodium cynomolgi.
XX
FH   Key             Location/Qualifiers
FT   CDS             326..1534
FT                   /*tag= a
FT                   /product= circumsporozoite protein
XX
PN   WO8700533-A.
XX
PD   29-JAN-1987.
XX
PF   24-JUN-1986;   86WO-US01373.
XX
PR   12-JUL-1985;   85US-0754645.
XX
PA   (UYNY-) NEW YORK UNIV.
PA   (ARNO/) ARNOT D E.
XX
PI   Arnot DE,  Enea V,  Nussenzwei RS,  Nussenzweig V;
XX
DR   WPI; 1987-037250/05.
DR   P-PSDB; AAP70709.
XX
PT   New Plasmodium vivax circumsporozoite protein - and synthetic
PT   peptide(s) contg. its dominant epitope, useful in anti-malarial
PT   vaccines
XX
PS   Disclosure; fig. 6; 32pp; English.
XX
CC   The gene encoding the circumsporozoite protein of P. cynomolgi
CC   is used during the detection of the circumsporozoite protein of P.
CC   vivax.  A DNA probe from this P. cynomolgi sequence was a 700 bp
CC   PstI fragment encoding the C-terminal domain and about 350
CC   bases of the 3' untranslated region of the gene.  Specifically,
CC   the probe, designated P236-7, encompasses bases 851-1827 flanked
CC   by C and G tails.  This gene is useful in the construction of an
CC   anti-malarial vaccine.  See also AAP70704-08 and AAN71064.
XX
SQ   Sequence 2000 BP; 655 A; 318 C; 527 G; 500 T; 0 other;


  Query Match             2.1%;  Score 41.6;  DB 8;  Length 2000;
  Best Local Similarity   43.5%;  Pred. No. 0.43;
  Matches  188;  Conservative    0;  Mismatches  244;  Indels    0;  Gaps    0;

Qy     370 AAAGCTCAGCTTTCCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACT 429
           || |  | | |   ||| ||| | |||  ||||    |     |  | |  |  | |||
Db     531 aaggagctgataaaccaaaaaaaaaggacgaaaaacaagtagaaaccaaaaaaagccacg 590

Qy     430 CTACGGGACACCCTGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAAC 489
           | |       | |    |  | |   |    |  | | |   || ||| | |      |
Db     591 cgaaaaataagctgaaacaaccaagagaagatggagctgctgctgcaggaggaggaggaa 650

Qy     490 AAGGCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAG 549
           | |   ||| |||||          | |  ||  |||| || | |||  ||||  | ||
Db     651 atgatggagctgctgctgcaggaggaggaggaaatgatggagctgctgctgcaggtggag 710

Qy     550 GATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATG 609
           || || || |   |    | |  | |||   |       | |    || ||        |
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```
Db    711 gaggaaacgatggagctgctgctgcaggtggaggaggaaacgatggagctgctgctgcag 770

Qy    610 GAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGAC 669
          ||| |    ||  |  |    | |   | ||     |||| |||   ||||   |
Db    771 gaggaggaggaaatgatggagctgctgctgcaggtggaggaggaaatgatggagctgctg 830

Qy    670 ATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAA 729
           ||   ||||   ||  | || ||||||| ||||    || |    | |      | ||
Db    831 ctgcaggtggaggaggaaacgatggagctgctgctgctgcaggtggaggaggaaacgatg 890

Qy    730 GAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAG 789
          |||     | |  || |||| |    ||  |       |   | ||  ||   |   | |
Db    891 gagctgctgcaggtggaggaggaaacgatcgagctgctgctgcaggaggaggaggaaatg 950

Qy    790 AAGGATTTGGTG 801
          | |||  || ||
Db    951 atggagctgctg 962


RESULT  20
AAA10595
ID   AAA10595 standard; DNA; 6741 BP.
XX
AC   AAA10595;
XX
DT   29-JUN-2000  (first entry)
XX
DE   Gene encoding a subunit of cellulose synthase.
XX
KW   Cellulose synthase; cellulose production; increase yield; ds.
XX
OS   Vigna angularis.
XX
PN   JP2000060568-A.
XX
PD   29-FEB-2000.
XX
PF   26-AUG-1998;   98JP-0239998.
XX
PR   26-AUG-1998;   98JP-0239998.
XX
PA   (MIZU/) MIZUNO K.
PA   (OJIP ) OJI PAPER CO.
XX
DR   WPI; 2000-342371/30.
DR   P-PSDB; AAY85180.
XX
PT   A gene encoding a cellulose synthetic equipment - for the improvement
PT   in the amount of cellulose synthesised in a plant body
XX
PS   Claim 2; Page 22-31; 32pp; Japanese.
XX
CC   This sequence represents a gene encoding a subunit of the cellulose
CC   synthase complex of Vigna angularis. The invention relates to subunits of
CC   cellulose synthetic equipment, that can be used to increase the amount of
CC   cellulose synthesised by a plant. The proteins and genes encoding them
CC   can also be used to improve the properties of the cellulose being
CC   produced by a plant.
XX
SQ   Sequence 6741 BP; 1712 A; 870 C; 1468 G; 1374 T; 1317 other;


  Query Match             2.1%;  Score 41;  DB 21;  Length 6741;
  Best Local Similarity   18.6%;  Pred. No. 1.2;
  Matches  116;  Conservative  204;  Mismatches  291;  Indels   11;  Gaps    2;

Qy    323 AGAATGTCTTGGATGCAGAATTCTTAAAGAATGAACTGGACAGCGTCAAAGCTCAGCTTT 382
          |:| ::   | :: |: :||  : :  :||: ||    :  |:      :  ::
Db   6081 asasysgtrtyrvagyysaagnysyssrgarggasngysgnarghggnsrmtysgaaaaa 6140

Qy    383 CCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACTCTACGGGACACCC 442
          :::  :  |  | :   ::|:: :    ::::: :| : ::|::: : : ::  :::|::
Db   6141 systyrgngyaaasntyrvaysasnasassrsrasasysysghsrrhgythrthrsrcys 6200

Qy    443 TGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAACAAGGCAGAGATGC 502
          :::|: |:  ::|   :: :: :|     ::: | :   :    ||::|:| |::|:| :
Db   6201 ysvamtargasrasngyvasrarggysrgyhvaaahsrthrrggaasrargaasrgmtas 6260

Qy    503 TG----TGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACC 558
           |    |:   :::: | ::| :: ||  :  :  :  | :| |  || | | : || :
Db   6261 ngyysmtvaaasrysrtyrvathraagnargysgasargargaaargggnaagnhaagnmt 6320

Qy    559 AAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATT 618
          |:  :||:  :::::   :   :     : ::|:|::   :|   : ::  | |:::|
Db   6321 argrvagymtrrsrvagyrargvarmttyrrrgygyrgygygngnhtyrgygngyrraar 6380

Qy    619 GAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTG 678
          ::|    :: : ::| |   : : ::| :|:   |  ::|    :::|:: : | | |:|
Db   6381 srgnaagyhgytyrgngngnvargymtargrgyaaaarvarasnhhvarmtvagngngyg 6440

Qy    679 GGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAG 738
           |   |  :| |          |: :|  |   |  | : |      :: : :| | :|:|:
Db   6441 ngngygnargrg-------ygyargargaavagngnsrgngnrvarmtmtrgngnmtrar 6493

Qy    739 AATCTGAAGGAAGCTCGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTG 798
            :  |:|  :|: |::::      :: : ::|   : ::| ||  :  :::: : :  :
Db   6494 ggyargvatyrargtyrrrgyargggymtrasvarmtrgyvaaagygymthsrvartyras 6553

Qy    799 GTGTCCTCTAGGAGCAAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAA 858
          : |: :   :  :| |   ::      : ||     |     |  :||   |: |:::
Db   6554 vagygymtrvaargasaasrsrgngnrgyaaaasraaaaasnaasrrggngnargthrmt 6613

Qy    859 CTGAGGTCAGCCCAGAAGGACTTACAAAGTGCTGACCAGGAGATCACGAGCCTAAGAAAG 918
           :||: |::::     : :|:  | |  :  : | :    |:   : |: ::  :: ||
Db   6614 gygasntyrrvaggngrasasnaaaaysvathrgymtgmtasgnthrgvahsgsrrgaay 6673

Qy    919 AAGTCTGATGATCCTCCAGGGA 940
          | ::  | || :  ::| :||
Db   6674 saaysvaaagaamtasvaarga 6695


RESULT  21
AAF21149
ID   AAF21149 standard; DNA; 1994 BP.
XX
AC   AAF21149;
XX
DT   14-MAR-2001  (first entry)
XX
DE   Human low adenosine antisense oligonucleotide related sequence #2716.
XX
KW   Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
KW   human; airway disorder; bronchoconstriction; lung inflammation;
KW   surfactant depletion; respiratory; bronchodilator; antiinflammatory;
KW   immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
KW   respiratory obstruction; pulmonary obstruction; impeded respiration;
KW   surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
KW   respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
KW   pulmonary hypertension; emphysema; pulmonary transplantation rejection;
KW   chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
KW   cancer; ss.
XX
OS   Homo sapiens.
XX
PN   WO200062736-A2.
XX
PD   26-OCT-2000.
XX
PF   24-MAR-2000; 2000WO-US08020.
XX
PR   06-APR-1999;   99US-0127958.
XX
PA   (UYEC-) UNIV EAST CAROLINA.
PA   (NYCE/) NYCE J W.
XX
PI   Nyce JW;
```

```
XX
DR   WPI; 2000-679539/66.
XX
PT   Low adenosine (A) content antisense oligonucleotides which do not
PT   trigger adenosine receptors during metabolism, useful e.g. for treating
PT   cancers and respiratory obstructions -
XX
PS   Disclosure; Page 1045-1046; 1592pp; English.
XX
CC   The present invention describes low adenosine (A) content antisense
CC   oligonucleotides and compositions (I) comprising them. In the antisense
CC   oligonucleotides the A is replaced by a 'Universal' or alternative base.
CC   (I) can have respiratory, bronchodilator, antiinflammatory, analgesic,
CC   immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
CC   The antisense oligonucleotides and (I) can be used to down-regulate the
CC   expression and or activity of target polypeptides associated with
CC   lung/respiratory disorders and malignancies, such as stimulating and
CC   activating peptide factors and transmitters, transcription factors,
CC   immunoglobulins and antibodies, antibody receptors, cytokines and
CC   chemokines, endogenously produced specific and non-specific enzymes,
CC   binding proteins, adhesion molecules and their receptors, cytokine and
CC   chemokine receptors, adenosine receptors, bradykinin receptors, central
CC   nervous system (CNS) and peripheral nervous and non-nervous system
CC   receptors, CNS and peripheral nervous and non-nervous system peptide
CC   transmitters, defensins, growth factors, vasoactive peptides and
CC   receptors, binding proteins and malignancy associated proteins. The
CC   antisense oligonucleotides may be used in this way to treat disorders
CC   including respiratory obstruction (especially pulmonary obstruction
CC   and/or bronchoconstriction) and/or lung inflammation, allergy(ies)
CC   and/or surfactant hypoproduction which are associated with a disease or
CC   condition selected from pulmonary vasoconstriction, inflammation,
CC   allergies, asthma, impeded respiration, respiratory distress syndrome
CC   (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
CC   hypertension, emphysema, chronic obstructive pulmonary disease (COPD),
CC   pulmonary transplantation rejection, pulmonary infections, bronchitis,
CC   and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
CC   fragments and antisense oligonucleotides used in the exemplification of
CC   the present invention.
XX
SQ   Sequence 1994 BP; 429 A; 585 C; 633 G; 347 T; 0 other;


  Query Match             2.1%;  Score 40.8;  DB 21;  Length 1994;
  Best Local Similarity   46.2%;  Pred. No. 0.73;
  Matches  135;  Conservative    0;  Mismatches  157;  Indels    0;  Gaps    0;

Qy     528 GAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACT 587
           | ||  ||||| |      |||||  | || | |  |      |||||||||| | |  |
Db     961 ggaggccctggtggccaaacaggaggtgatcgataagctgaaggaggaggccgagcagca 1020

Qy     588 CAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGA 647
           ||||     |||| | ||| |   |     |  ||  ||       | | | |     | ||
Db    1021 caagattgtgatggagaccgttccggtgctgaaggcccaggcggatatctacaaggcgga 1080

Qy     648 GGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGT 707
             | |||    ||  |  | |  ||    |           |  |||||  |||   |
Db    1081 cttccaggctgagaggcaggcccgggagaagctggccgagaagaaggagctcctgcagga 1140

Qy     708 GTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGG 767
           | |    | |   ||  |||  |||||    || |||||||      |  |||   | |
Db    1141 gcagctggagcagctgcagagggagtacagcaaactgaaggccagctgtcaggagtcggc 1200

Qy     768 GGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTG 819
             | |  |||| |  ||||  | || | | |  |||   |  |   |||
Db    1201 caggatcgaggacatgaggaagcggcatgtcgaggtctcccaggcccccttg 1252


RESULT  22
AAC81426
ID   AAC81426 standard; cDNA; 1994 BP.
XX
AC   AAC81426;
XX
DT   23-FEB-2001  (first entry)
XX
DE   Human I-kappa-B kinase gamma-subunit (IKK-gamma) cDNA.
XX
KW   Human; I-kappa-B kinase; IKK; antisense therapy; gene therapy;
KW   cytokine expression inhibition; NF-kappa-B activation inhibition;
KW   nuclear factor-kappa-B; rheumatoid arthritis; immune disorder;
KW   cancer; IKK-gamma; gamma-subunit; ss.
XX
OS   Homo sapiens.
XX
PN   JP2000253884-A.
XX
PD   19-SEP-2000.
XX
PF   10-MAR-1999;   99JP-0063291.
XX
PR   10-MAR-1999;   99JP-0063291.
XX
PA   (TOAG ) TOA GOSEI CHEM IND LTD.
XX
DR   WPI; 2000-658813/64.
XX
PT   Antisense nucleic acid compound complementary to the subunit of
PT   IkappaB, used to treat rheumatic arthritis, immune diseases and cancer
PT   -
XX
PS   Claim 3; Page 14-15; 20pp; Japanese.
XX
CC   The invention relates to an antisense oligonucelotide targetted to
CC   a gene encoding a subunit of I-kappa-B kinase (IKK) which inhibits its
CC   expression, and thereby inhibits expression of a cytokine such as
CC   IL-6 (interleukin-6). I-kappa-B kinase activates NF-kappa-B (nuclear
CC   factor-kappa-B) which acts a transcriptional regulator of cytokine
CC   genes. The antisense oligonucleotide can be used in gene therapy to
CC   treat rheumatoid arthritis, immune disorders and cancers. Sequences
CC   AAC81422-C81426 are cDNAs derived from genes whose expression may be
CC   inhibited using an antisense oligonucleotide of the invention.
CC   The present sequence represents a human IKK-gamma subunit cDNA.
XX
SQ   Sequence 1994 BP; 429 A; 585 C; 633 G; 347 T; 0 other;


  Query Match             2.1%;  Score 40.8;  DB 21;  Length 1994;
  Best Local Similarity   46.2%;  Pred. No. 0.73;
  Matches  135;  Conservative    0;  Mismatches  157;  Indels    0;  Gaps    0;

Qy     528 GAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACT 587
           | ||  ||||| |      |||||  | || | |  |      |||||||||| | |  |
Db     961 ggaggccctggtggccaaacaggaggtgatcgataagctgaaggaggaggccgagcagca 1020

Qy     588 CAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGA 647
           ||||     |||| | ||| |   |     |  ||  ||       | | | |     | ||
Db    1021 caagattgtgatggagaccgttccggtgctgaaggcccaggcggatatctacaaggcgga 1080

Qy     648 GGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGT 707
             | |||    ||  |  | |  ||    |           |  |||||  |||   |
Db    1081 cttccaggctgagaggcaggcccgggagaagctggccgagaagaaggagctcctgcagga 1140

Qy     708 GTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGG 767
           | |    | |   ||  |||  |||||    || |||||||      |  |||   | |
Db    1141 gcagctggagcagctgcagagggagtacagcaaactgaaggccagctgtcaggagtcggc 1200

Qy     768 GGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTG 819
             | |  |||| |  ||||  | || | | |  |||   |  |   |||
Db    1201 caggatcgaggacatgaggaagcggcatgtcgaggtctcccaggcccccttg 1252


RESULT  23
AAA35027
ID   AAA35027 standard; DNA; 1994 BP.
XX
AC   AAA35027;
```

```
XX
DT   28-JUL-2000  (first entry)
XX
DE   Human adenosine receptor related polynucleotide SEQ ID NO:2716.
XX
KW   Human; adenosine receptor; low adenosine antisense oligonucleotide;
KW   phosphorothioate; impaired respiration; inflammation; allergy;
KW   allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
KW   antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway;
KW   lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
KW   respiratory distress syndrome; pain; cystic fibrosis; emphysema;
KW   pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
KW   cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
XX
OS   Homo sapiens.
XX
PN   WO200009525-A2.
XX
PD   24-FEB-2000.
XX
PF   03-AUG-1999;   99WO-US17712.
XX
PR   03-AUG-1998;   98US-0095212.
XX
PA   (UYEC-) UNIV EAST CAROLINA.
XX
PI   Nyce JW;
XX
DR   WPI; 2000-205971/18.
XX
PT   New antisense oligonucleotides useful for treating e.g. pulmonary
PT   vasoconstriction, inflammation, allergies, asthma, hypertension,
PT   bronchitis, emphysema, respiratory distress syndrome, ischemia or
PT   cancers -
XX
PS   Disclosure; Page 968-969; 1343pp; English.
XX
CC   The present invention describes a new composition comprising an
CC   antisense oligonucleotide (ON) with low adenosine (up to 15%), which
CC   targets nucleic acids involved in bronchoconstriction, allergies, and/or
CC   inflammation. The ON can have antiinflammatory, antiallergic,
CC   antiasthmatic, cytostatic and analgesic activities. The compositions are
CC   useful for the treatment of diseases associated with inflammation,
CC   impaired airways, including lung disease and diseases whose secondary
CC   effects afflict the lungs of a subject. They can be used for treating
CC   e.g. ischaemic conditions, pulmonary vasoconstriction, allergies,
CC   asthma, impeded respiration, respiratory distress syndrome, pain, cystic
CC   fibrosis, pulmonary hypertension, emphysema, chronic obstructive
CC   pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
CC   carcinomas, and cancers which may metastasise to the lungs, including
CC   breast and prostate cancer. The reduction of the adenosine content of
CC   the ONs reduces side effects. The A-containing ONs break down with the
CC   release of deoxyadenosine which activates adenosine receptors causing
CC   bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
CC   nucleotide sequences given in the sequence listing from the present
CC   invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC   185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC   differ from the previously named sequences. SEQ ID NO:11 to 1680
CC   (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC   invention. N.B. Sequences given in the disclosure of the present
CC   invention do not match up with their corresponding SEQ ID NO: sequences
CC   given in the sequence listing.
XX
SQ   Sequence 1994 BP; 429 A; 585 C; 633 G; 347 T; 0 other;


  Query Match             2.1%;  Score 40.8;  DB 21;  Length 1994;
  Best Local Similarity   46.2%;  Pred. No. 0.73;
  Matches  135;  Conservative    0;  Mismatches  157;  Indels    0;  Gaps    0;

Qy    528 GAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACT 587
          | ||  ||||| |      |||||  | || | |  |      ||||||||||  | |  |
Db    961 ggaggccctggtggccaaacaggaggtgatcgataagctgaaggaggaggccgagcagca 1020

Qy    588 CAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGA 647
          ||||     |||| | ||| |   |     |  ||  ||      | | | |     | ||
Db   1021 caagattgtgatggagaccgttccggtgctgaaggcccaggcggatatctacaaggcgga 1080

Qy    648 GGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGT 707
            |  |||    ||  |  | |  ||    |          |  |||||  |||   |
Db   1081 cttccaggctgagaggcaggcccgggagaagctggccgagaagaaggagctcctgcagga 1140

Qy    708 GTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGG 767
          | |    | |   ||  |||  ||||     || |||||||      |  |||   | |
Db   1141 gcagctggagcagctgcagagggagtacagcaaactgaaggccagctgtcaggagtcggc 1200

Qy    768 GGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTG 819
              | |  |||| |  ||||  | || | | |  |||   |  |   |||
Db   1201 caggatcgaggacatgaggaagcggcatgtcgaggtctcccaggccccttg 1252


RESULT  24
AAZ07513
ID   AAZ07513 standard; DNA; 2009 BP.
XX
AC   AAZ07513;
XX
DT   26-NOV-1999  (first entry)
XX
DE   Human RIP-associated protein (RAP-2) encoding DNA.
XX
KW   Receptor interacting protein; RIP-associated protein-2; RAP-2; RIP;
KW   inflammation; cell death; cell survival; septic shock; hepatitis;
KW   graft versus host rejection; diabetes; multiple sclerosis; tumor;
KW   HIV infection; p55-receptor; FAS-receptor; human; ss.
XX
OS   Homo sapiens.
XX
PN   WO9947672-A1.
XX
PD   23-SEP-1999.
XX
PF   18-MAR-1999;   99WO-IL00158.
XX
PR   19-MAR-1998;   98IL-0123758.
PR   01-SEP-1998;   98IL-0126024.
XX
PA   (YEDA ) YEDA RES & DEV CO LTD.
PA   (YESH ) UNIV YESHIVA EINSTEIN COLLEGE.
XX
PI   Wallach D,  Kovalenko A,  Horwitz MS,  Li Y;
XX
DR   WPI; 1999-562113/47.
DR   P-PSDB; AAY27430.
XX
PT   New receptor interacting protein-associated protein-2, used to develop
PT   products for treating, e.g. septic shock, tumors or HIV infection -
XX
PS   Claim 4; Fig 1A-B; 132pp; English.
XX
CC   This DNA encodes a receptor interacting protein (RIP)-associated protein
CC   -2 (RAP-2). The RAP-2 proteins, isoforms, analogs, fragments or
CC   derivatives or DNA can be used for the modulation or mediation of the
CC   RIP modulated/mediated intracellular effects on the inflammation, cell
CC   death or cell survival pathways in which RIP is involved directly, or
CC   indirectly via other modulators/mediators of these pathways. They can be
CC   used for treating e.g. septic shock, graft versus host rejection, acute
CC   hepatitis, diabetes or multiple sclerosis. They can also be used for
CC   treating tumor cells or HIV-infected cells or other diseased cells. The
CC   RAP-2 binding proteins can be used for modulating/mediating the function
CC   of RAP-2. The products can also be used for diagnostic purposes, e.g. for
CC   identifying disorders related to abnormal functioning of cellular effects
CC   mediated by the p55-R, FAS-R or other related receptors.
XX
SQ   Sequence 2009 BP; 418 A; 587 C; 643 G; 356 T; 5 other;
```

```
  Query Match             2.1%;  Score 40.8;  DB 20;  Length 2009;
  Best Local Similarity   46.2%;  Pred. No. 0.73;
  Matches  135;  Conservative    0;  Mismatches  157;  Indels    0;  Gaps    0;

Qy     528 GAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACT 587
           | ||  ||||| |       ||||| | || | |  |      ||||||||| | |  |
Db     966 ggaggccctggtggccaaacaggaggtgatcgataagctgaaggaggaggccgagcagca 1025

Qy     588 CAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGA 647
           ||||     |||| | ||| |    |    |  ||  ||       | | | |     | ||
Db    1026 caagattgtgatggagaccgttccggtgctgaaggcccaggcggatatctacaaggcgga 1085

Qy     648 GGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGT 707
             |  |||    ||  |  | |  ||    |           |  |||||  |||   |
Db    1086 cttccaggctgagaggcaggcccgggagaagctggccgagaagaaggagctcctgcagga 1145

Qy     708 GTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGG 767
           | |    | |   ||  |||  |||||    || |||||||      |  |||   | |
Db    1146 gcagctggagcagctgcagagggagtacagcaaactgaaggccagctgtcaggagtcggc 1205

Qy     768 GGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTG 819
             | |  |||| |  ||||  | || | | |  |||   |  |   |||
Db    1206 caggatcgaggacatgaggaagcggcatgtcgaggtctcccaggccccttg 1257


RESULT  25
AAZ07514
ID   AAZ07514 standard; DNA; 2034 BP.
XX
AC   AAZ07514;
XX
DT   26-NOV-1999  (first entry)
XX
DE   Human RIP-associated protein (RAP-2) clone #41072 nucleotide sequence.
XX
KW   Receptor interacting protein; RIP-associated protein-2; RAP-2; RIP;
KW   inflammation; cell death; cell survival; septic shock; hepatitis;
KW   graft versus host rejection; diabetes; multiple sclerosis; tumor;
KW   HIV infection; p55-receptor; FAS-receptor; human; ss.
XX
OS   Homo sapiens.
XX
PN   WO9947672-A1.
XX
PD   23-SEP-1999.
XX
PF   18-MAR-1999;   99WO-IL00158.
XX
PR   19-MAR-1998;   98IL-0123758.
PR   01-SEP-1998;   98IL-0126024.
XX
PA   (YEDA ) YEDA RES & DEV CO LTD.
PA   (YESH ) UNIV YESHIVA EINSTEIN COLLEGE.
XX
PI   Wallach D,  Kovalenko A,  Horwitz MS,  Li Y;
XX
DR   WPI; 1999-562113/47.
XX
PT   New receptor interacting protein-associated protein-2, used to develop
PT   products for treating, e.g. septic shock, tumors or HIV infection  -
XX
PS   Claim 5; Fig 2A-B; 132pp; English.
XX
CC   The invention relates to areceptor interacting protein (RIP)-associated
CC   protein-2 (RAP-2). The RAP-2 proteins, isoforms, analogs, fragments or
CC   derivatives or DNA can be used for the modulation or mediation of the
CC   RIP modulated/mediated intracellular effects on the inflammation, cell
CC   death or cell survival pathways in which RIP is involved directly, or
CC   indirectly via other modulators/mediators of these pathways. They can be
CC   used for treating e.g. septic shock, graft versus host rejection, acute
CC   hepatitis, diabetes or multiple sclerosis. They can also be used for
CC   treating tumor cells or HIV-infected cells or other diseased cells. The
CC   RAP-2 binding proteins can be used for modulating/mediating the function
CC   of RAP-2. The products can also be used for diagnostic purposes, e.g.
CC   for identifying disorders related to abnormal functioning of cellular
CC   effects mediated by the p55-R, FAS-R or other related receptors. The
CC   present sequence represents the nucleotide sequence of RAP-2 clone
CC   #41072. This sequence was identical to a 1.5 kb clone (AAZ07513) in its
CC   coding region, but showed differences in the5' non-coding region. Both
CC   these sequences are assumed to be alternatively spliced forms of the same
CC   gene.
XX
SQ   Sequence 2034 BP; 427 A; 588 C; 633 G; 382 T; 4 other;


  Query Match             2.1%;  Score 40.8;  DB 20;  Length 2034;
  Best Local Similarity   46.2%;  Pred. No. 0.73;
  Matches  135;  Conservative    0;  Mismatches  157;  Indels    0;  Gaps    0;

Qy     528 GAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACT 587
           | ||  ||||| |       ||||| | || | |  |      ||||||||| | |  |
Db     990 ggaggccctggtggccaaacaggaggtgatcgataagctgaaggaggaggccgagcagca 1049

Qy     588 CAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGA 647
           ||||     |||| | ||| |    |    |  ||  ||       | | | |     | ||
Db    1050 caagattgtgatggagaccgttccggtgctgaaggcccaggcggatatctacaaggcgga 1109

Qy     648 GGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGT 707
             |  |||    ||  |  | |  ||    |           |  |||||  |||   |
Db    1110 cttccaggctgagaggcaggcccgggagaagctggccgagaagaaggagctcctgcagga 1169

Qy     708 GTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGG 767
           | |    | |   ||  |||  |||||    || |||||||      |  |||   | |
Db    1170 gcagctggagcagctgcagagggagtacagcaaactgaaggccagctgtcaggagtcggc 1229

Qy     768 GGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTG 819
             | |  |||| |  ||||  | || | | |  |||   |  |   |||
Db    1230 caggatcgaggacatgaggaagcggcatgtcgaggtctcccaggccccttg 1281


RESULT  26
AAF21150
ID   AAF21150 standard; DNA; 8631 BP.
XX
AC   AAF21150;
XX
DT   14-MAR-2001  (first entry)
XX
DE   Human low adenosine antisense oligonucleotide related sequence #2717.
XX
KW   Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
KW   human; airway disorder; bronchoconstriction; lung inflammation;
KW   surfactant depletion; respiratory; bronchodilator; antiinflammatory;
KW   immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
KW   respiratory obstruction; pulmonary obstruction; impeded respiration;
KW   surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
KW   respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
KW   pulmonary hypertension; emphysema; pulmonary transplantation rejection;
KW   chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
KW   cancer; ss.
XX
OS   Homo sapiens.
XX
PN   WO200062736-A2.
XX
PD   26-OCT-2000.
XX
PF   24-MAR-2000; 2000WO-US08020.
XX
PR   06-APR-1999;   99US-0127958.
XX
PA   (UYEC-) UNIV EAST CAROLINA.
PA   (NYCE/) NYCE J W.
XX
PI   Nyce JW;
```

```
XX
DR   WPI; 2000-679539/66.
XX
PT   Low adenosine (A) content antisense oligonucleotides which do not
PT   trigger adenosine receptors during metabolism, useful e.g. for treating
PT   cancers and respiratory obstructions -
XX
PS   Disclosure; Page 1046-1048; 1592pp; English.
XX
CC   The present invention describes low adenosine (A) content antisense
CC   oligonucleotides and compositions (I) comprising them. In the antisense
CC   oligonucleotides the A is replaced by a 'Universal' or alternative base.
CC   (I) can have respiratory, bronchodilator, antiinflammatory, analgesic,
CC   immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
CC   The antisense oligonucleotides and (I) can be used to down-regulate the
CC   expression and or activity of target polypeptides associated with
CC   lung/respiratory disorders and malignancies, such as stimulating and
CC   activating peptide factors and transmitters, transcription factors,
CC   immunoglobulins and antibodies, antibody receptors, cytokines and
CC   chemokines, endogenously produced specific and non-specific enzymes,
CC   binding proteins, adhesion molecules and their receptors, cytokine and
CC   chemokine receptors, adenosine receptors, bradykinin receptors, central
CC   nervous system (CNS) and peripheral nervous and non-nervous system
CC   receptors, CNS and peripheral nervous and non-nervous system peptide
CC   transmitters, defensins, growth factors, vasoactive peptides and
CC   receptors, binding proteins and malignancy associated proteins. The
CC   antisense oligonucleotides may be used in this way to treat disorders
CC   including respiratory obstruction (especially pulmonary obstruction
CC   and/or bronchoconstriction) and/or lung inflammation, allergy(ies)
CC   and/or surfactant hypoproduction which are associated with a disease or
CC   condition selected from pulmonary vasoconstriction, inflammation,
CC   allergies, asthma, impeded respiration, respiratory distress syndrome
CC   (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
CC   hypertension, emphysema, chronic obstructive pulmonary disease (COPD),
CC   pulmonary transplantation rejection, pulmonary infections, bronchitis,
CC   and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
CC   fragments and antisense oligonucleotides used in the exemplification of
CC   the present invention.
XX
SQ   Sequence 8631 BP; 2280 A; 2050 C; 2270 G; 2031 T; 0 other;


  Query Match             2.1%;  Score 40.8;  DB 21;  Length 8631;
  Best Local Similarity   46.2%;  Pred. No. 1.6;
  Matches  135;  Conservative    0;  Mismatches  157;  Indels    0;  Gaps    0;

Qy     528 GAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACT 587
           | ||  ||||| |      |||| | || | |  |      |||||||||| | |  |
Db    7598 ggaggccctggtggccaaacaggaggtgatcgataagctgaaggaggaggccgagcagca 7657

Qy     588 CAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGA 647
           ||||     |||| | ||| |   |    |  ||  ||      | | | |     | ||
Db    7658 caagattgtgatggagaccgttccggtgctgaaggcccaggcggatatctacaaggcgga 7717

Qy     648 GGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGT 707
             |  |||    ||  |  | |  ||    |           |  |||||  |||   |
Db    7718 cttccaggctgagaggcaggcccgggagaagctggccgagaagaaggagctcctgcagga 7777

Qy     708 GTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGG 767
           | |    | |   ||  |||  |||||    || |||||||      |  |||   | |
Db    7778 gcagctggagcagctgcagagggagtacagcaaactgaaggccagctgtcaggagtcggc 7837

Qy     768 GGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTG 819
             | |  |||| |  ||||  | || | | |  |||   |  |   |||
Db    7838 caggatcgaggacatgaggaagcggcatgtcgaggtctcccaggcccccttg 7889


RESULT  27
AAA35028
ID   AAA35028 standard; DNA; 8631 BP.
XX
AC   AAA35028;
XX
DT   28-JUL-2000  (first entry)
XX
DE   Human adenosine receptor related polynucleotide SEQ ID NO:2717.
XX
KW   Human; adenosine receptor; low adenosine antisense oligonucleotide;
KW   phosphorothioate; impaired respiration; inflammation; allergy;
KW   allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
KW   antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway;
KW   lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
KW   respiratory distress syndrome; pain; cystic fibrosis; emphysema;
KW   pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
KW   cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
XX
OS   Homo sapiens.
XX
PN   WO200009525-A2.
XX
PD   24-FEB-2000.
XX
PF   03-AUG-1999;   99WO-US17712.
XX
PR   03-AUG-1998;   98US-0095212.
XX
PA   (UYEC-) UNIV EAST CAROLINA.
XX
PI   Nyce JW;
XX
DR   WPI; 2000-205971/18.
XX
PT   New antisense oligonucleotides useful for treating e.g. pulmonary
PT   vasoconstriction, inflammation, allergies, asthma, hypertension,
PT   bronchitis, emphysema, respiratory distress syndrome, ischemia or
PT   cancers -
XX
PS   Disclosure; Page 969-971; 1343pp; English.
XX
CC   The present invention describes a new composition comprising an
CC   antisense oligonucleotide (ON) with low adenosine (up to 15%), which
CC   targets nucleic acids involved in bronchoconstriction, allergies, and/or
CC   inflammation. The ON can have antiinflammatory, antiallergic,
CC   antiasthmatic, cytostatic and analgesic activities. The compositions are
CC   useful for the treatment of diseases associated with inflammation,
CC   impaired airways, including lung disease and diseases whose secondary
CC   effects afflict the lungs of a subject. They can be used for treating
CC   e.g. ischaemic conditions, pulmonary vasoconstriction, allergies,
CC   asthma, impeded respiration, respiratory distress syndrome, pain, cystic
CC   fibrosis, pulmonary hypertension, emphysema, chronic obstructive
CC   pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
CC   carcinomas, and cancers which may metastasise to the lungs, including
CC   breast and prostate cancer. The reduction of the adenosine content of
CC   the ONs reduces side effects. The A-containing ONs break down with the
CC   release of deoxyadenosine which activates adenosine receptors causing
CC   bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
CC   nucleotide sequences given in the sequence listing from the present
CC   invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC   185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC   differ from the previously named sequences. SEQ ID NO:11 to 1680
CC   (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC   invention. N.B. Sequences given in the disclosure of the present
CC   invention do not match up with their corresponding SEQ ID NO: sequences
CC   given in the sequence listing.
XX
SQ   Sequence 8631 BP; 2280 A; 2050 C; 2270 G; 2031 T; 0 other;


  Query Match             2.1%;  Score 40.8;  DB 21;  Length 8631;
  Best Local Similarity   46.2%;  Pred. No. 1.6;
  Matches  135;  Conservative    0;  Mismatches  157;  Indels    0;  Gaps    0;

Qy     528 GAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACT 587
           | ||  ||||| |      |||| | || | |  |      |||||||||| | |  |
Db    7598 ggaggccctggtggccaaacaggaggtgatcgataagctgaaggaggaggccgagcagca 7657
```

```
Qy     588 CAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGA 647
           ||||     |||| | ||| |   |    |  ||  ||      | | | |     | ||
Db    7658 caagattgtgatggagaccgttccggtgctgaaggcccaggcggatatctacaaggcgga 7717

Qy     648 GGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGT 707
             |  |||    ||  |  | |  ||    |           |  |||||  |||   |
Db    7718 cttccaggctgagaggcaggcccgggagaagctggccgagaagaaggagctcctgcagga 7777

Qy     708 GTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGG 767
           | |    | |   ||  |||  |||||    || |||||||      |  |||   | |
Db    7778 gcagctggagcagctgcagagggagtacagcaaactgaaggccagctgtcaggagtcggc 7837

Qy     768 GGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGCAAGTTG 819
             | |  |||| |  |||| | || | | |  |||   |  |   |||
Db    7838 caggatcgaggacatgaggaagcggcatgtcgaggtctcccaggccccttg 7889
```

RESULT 28
AAA30290
ID AAA30290 standard; DNA; 3489 BP.
XX
AC AAA30290;
XX
DT 11-SEP-2000 (first entry)
XX
DE Kaposi's sarcoma-associated herpesvirus LANA gene.
XX
KW Kaposi's sarcoma-associated herpesvirus; KSHV; rhadino virus;
KW latency-associated nuclear antigen; LANA; gamma-2 herpes virus;
KW Human herpes virus 8; HHV8; rhadino virus cis-acting element; RVCAE;
KW Kaposi's sarcoma; primary effusion lymphoma; PEL;
KW human immunodeficiency virus; HIV; multicentric Castleman's disease; ds.
XX
OS Kaposi's sarcoma-associated herpesvirus.
XX

FH	Key	Location/Qualifiers
FT	CDS	1..3489
FT		/*tag= a
FT		/product= "LANA"
FT	misc_signal	40..50
FT		/*tag= b
FT		/note= "nuclear localisation signal, NLS"
FT	misc_signal	190..210
FT		/*tag= c
FT		/note= "nuclear localisation signal, NLS"

XX
PN WO200029626-A1.
XX
PD 25-MAY-2000.
XX
PF 19-NOV-1999; 99WO-US27508.
XX
PR 19-NOV-1998; 98US-0109422.
PR 21-APR-1999; 99US-0298568.
XX
PA (KIEF/) KIEFF E D.
PA (BALL/) BALLESTAS M E.
PA (KAYE/) KAYE K M.
XX
PI Kieff ED, Ballestas ME, Kaye KM;
XX
DR WPI; 2000-387829/33.
DR P-PSDB; AAY96255.
XX
PT Treating or preventing a disease associated with rhodino virus
PT infection in a mammal which includes Kaposi's Sarcoma and Primary
PT Effusion Lymphoma -
XX
PS Disclosure; Fig 6; 70pp; English.
XX
CC The present sequence is the Kaposi's sarcoma-associated herpesvirus,
CC (KSHV) latency-associated nuclear antigen (LANA) gene. KSHV is also known
CC as Human Herpes Virus 8 (HHV8) and belongs to the rhadino virus, or
CC gamma-2 herpes virus class. The LANA protein is necessary for the
CC efficient persistence of rhadino virus DNA in mammalian cells. Persistent
CC rhadino virus infection is implicated in a variety of diseases e.g.
CC Kaposi's Sarcoma (KS), Primary Effusion Lymphoma (PEL) and multicentric
CC Castleman's disease. In addition, KS is a common malignancy in HIV
CC patients. KSHV persists in host cells in a latent form. One of the few
CC genes expressed from the latent viral DNA is LANA. LANA associates with
CC both human chromosomes and with the rhadino virus cis-acting element
CC (RVCAE), thereby providing a tethering function: the KSHV DNA episome is
CC "tied" to the host chromosomes. This allows the viral DNA to persist in
CC the host cell. The present sequence may be used to screen and identify
CC molecules that inhibit LANA interaction with RVCAE, thereby interfering
CC with the latency cycle of this virus. Potential antiviral treatments for
CC the above mentioned diseases may therefore be based on LANA deregulation.
XX
SQ Sequence 3489 BP; 1053 A; 862 C; 1137 G; 437 T; 0 other;

Query Match 2.0%; Score 40.4; DB 21; Length 3489;
Best Local Similarity 44.0%; Pred. No. 1.3;
Matches 170; Conservative 0; Mismatches 216; Indels 0; Gaps 0;

```
Qy     514 CTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAG 573
           | | |  |  ||  | ||   | |||  ||| |||| |  ||    | ||    | | ||
Db    2191 cagcaggatgagcagcagcaggatgagcagcagcagcaggatgagcagcagcagcag 2250

Qy     574 GAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAG 633
           || |  ||   |   ||    ||  | |      |||| |    ||||      |  ||
Db    2251 gatgaacaggagcagcaggaggagcaggagcagcaggaggagcaggagcaggagttagag 2310

Qy     634 AGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTG 693
              |||      ||| | |||||   |   |  ||  | |  | |    ||   | | |
Db    2311 gagcaggagcaggagttagaggatcaggagcaggagttagaggagcaggagcaggagtta 2370

Qy     694 GAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCT 753
           ||| ||| ||    | | |  | |   |   || | ||||  ||| | | | || | |
Db    2371 gaggagcaggagcaggagttagaggagcaggagcaggagttagaggagcaggagcaggag 2430

Qy     754 CGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGC 813
             |||     | | |   |   ||   |  | || |||| || | |      |
Db    2431 ttagaggagcaggagcaggagttagaggagcaggagcaggagttagaggagcaggagcag 2490

Qy     814 AAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAACTGAGGTCAGCCCAG 873
           ||||  ||   |  |   ||| | ||  ||    || | |||  |          ||
Db    2491 gagttagaggagcaggagcaggagttagaggagcaggaggtggaagagcaagagcaggag 2550

Qy     874 AAGGACTTACAAAGTGCTGACCAGGA 899
             |||    |||      || |||||
Db    2551 gtggaagagcaagagcaggagcagga 2576
```

RESULT 29
AAF82901
ID AAF82901 standard; DNA; 3489 BP.
XX
AC AAF82901;
XX
DT 29-JUN-2001 (first entry)
XX
DE Nucleotide sequence of KSHV tethering protein, LANA.
XX
KW Histone H1; tethering protein; LANA; gene therapy; multiple sclerosis;
KW Parkinson's disease; Huntington disease; diabetes; human herpesvirus 8;
KW KSHV; latency-associated nuclear antigen; LANA; ds.
XX
OS Kaposi's sarcoma associated herpesvirus.
XX

FH	Key	Location/Qualifiers
FT	CDS	1..3489
FT		/*tag= a

XX
PN WO200125484-A2.
XX

PD 12-APR-2001.
XX
PF 29-SEP-2000; 2000WO-US26908.
XX
PR 01-OCT-1999; 99US-0410399.
XX
PA (UNMI) UNIV MICHIGAN.
XX
PI Robertson ES, Cotter MA;
XX
DR WPI; 2001-281736/29.
DR P-PSDB; AAB62331.
XX
PT A composition for use in gene therapy comprises an expression vector
PT that includes a nucleic acid sequence encoding a nucleic acid binding
PT protein -
XX
PS Disclosure; Fig 9A; 60pp; English.
XX
CC The invention provides a composition comprising nucleic acid, histone H1
CC protein and expression vector operationally encoding a protein suitable
CC for tethering the nucleic acid to the histone H1 protein, where the
CC tethering protein is LANA. The composition is useful in aiding the
CC retention of the viral DNA in the host cell. The viral vector encodes a
CC protein suitable for tethering DNA to Histone H1. Methods for screening
CC for compounds which are agonistic or antagonistic for the tethering of
CC viral proteins to histone H1 and DNA binding sites are useful for
CC developing the method of viral transfer. The composition has applications
CC to gene therapy, including the treatment of multiple sclerosis,
CC Parkinson's disease, Huntington disease and diabetes. The present
CC sequence represents the nucleotide sequence of the Kaposi's sarcoma
CC associated herpesvirus (human herpesvirus 8) latency-associated nuclear
CC antigen (LANA), which acts as a tethering protein.
XX
SQ Sequence 3489 BP; 1053 A; 862 C; 1137 G; 437 T; 0 other;

Query Match 2.0%; Score 40.4; DB 22; Length 3489;
Best Local Similarity 44.0%; Pred. No. 1.3;
Matches 170; Conservative 0; Mismatches 216; Indels 0; Gaps 0;

Qy 514 CTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAG 573
Db 2191 cagcaggatgagcagcagcagcaggatgagcagcagcagcaggatgagcagcagcagcag 2250

Qy 574 GAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAG 633
Db 2251 gatgaacaggagcagcaggaggagcaggagcagcaggaggagcaggagcaggagttagag 2310

Qy 634 AGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTG 693
Db 2311 gagcaggagcaggagttagaggatcaggagcaggagttagaggagcaggagcaggagtta 2370

Qy 694 GAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCT 753
Db 2371 gaggagcaggagcaggagttagaggagcaggagcaggagttagaggagcaggagcaggag 2430

Qy 754 CGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGC 813
Db 2431 ttagaggagcaggagcaggagttagaggagcaggagcaggagttagaggagcaggagcag 2490

Qy 814 AAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAACTGAGGTCAGCCCAG 873
Db 2491 gagttagaggagcaggagcaggagttagaggagcaggaggtggaagagcaagagcaggag 2550

Qy 874 AAGGACTTACAAAGTGCTGACCAGGA 899
Db 2551 gtggaagagcaagagcaggagcagga 2576

RESULT 30
AAV73805/c
ID AAV73805 standard; DNA; 32207 BP.
XX
AC AAV73805;
XX
DT 25-FEB-1999 (first entry)
XX
DE KSHV LUR DNA (nucleotides 105,301-137,507).
XX
KW Kaposi's sarcoma; acquired immune deficiency syndrome; AIDS; DHFR; Bcl-2;
KW dihydrofolate reductase; LUR; long unique region; vaccine; prophylaxis;
KW diagnosis; treatment; HHV8; capsid protein IV; tegument protein IV;
KW glycoprotein; kaposin; cyclin D; immediate early protein; IEP; OX-2;
KW v-adh; G-protein coupled receptor; FGARAT; ds.
XX
OS Kaposi's sarcoma-associated herpesvirus.
XX
PN US5849564-A.
XX
PD 15-DEC-1998.
XX
PF 29-NOV-1996; 96US-0770379.
XX
PR 29-NOV-1996; 96US-0770379.
XX
PA (UYCO) UNIV COLUMBIA NEW YORK.
XX
PI Bohenzky RA, Chang Y, Edelman IS, Moore PS, Russo JJ;
XX
DR WPI; 1999-069741/06.
XX
PT Kaposi's sarcoma-associated herpes virus nucleic acid - encodes
PT di:hydro:folate reductase and is useful for treatment, prophylaxis
PT or diagnosis of Kaposi's sarcoma
XX
PS Disclosure; Column 155-182; 109pp; English.
XX
CC This sequence is a fragment of the Kaposi's sarcoma-associated
CC herpesvirus (KSHV) LUR (long unique region). This fragment contains
CC coding regions for ORF65 which encodes capsid protein IV, ORF66, ORF67
CC which encodes tegument protein IV, ORF68 which encodes a glycoprotein,
CC ORF69, K12 which encodes kaposin, K13, ORF72 which encodes cyclin D,
CC ORF73 which encodes immediate early protein (IEP), K14 which encodes
CC OX-2 (v-adh), ORF74 which encodes G-protein coupled receptor, ORF75
CC which encodes tegument protein/FGARAT, K15. KSHV is a new human
CC Herpesvirus (HHV8) believed to cause Kaposi's sarcoma (KS) which is the
CC most common form of neoplasm occurring in persons with acquired immune
CC deficiency syndrome (AIDS). The DHFR protein is useful for vaccination,
CC prophylaxis, diagnosis and treatment of a subject with Kaposi's sarcoma
CC and for detecting expression of a DNA virus associated with Kaposi's
CC sarcoma in a cell.
XX
SQ Sequence 32207 BP; 7229 A; 9156 C; 8713 G; 7109 T; 0 other;

Query Match 2.0%; Score 40.4; DB 20; Length 32207;
Best Local Similarity 44.0%; Pred. No. 4.3;
Matches 170; Conservative 0; Mismatches 216; Indels 0; Gaps 0;

Qy 514 CTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAG 573
Db 19806 CAGCAGGATGAGCAGCAGCAGCAGGATGAGCAGCAGCAGCAGGATGAGCAGCAGCAGCAG 19747

Qy 574 GAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAG 633
Db 19746 GATGAACAGGAGCAGCAGGAGGAGCAGGAGCAGCAGGAGGAGCAGGAGCAGGAGTTAGAG 19687

Qy 634 AGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTG 693
Db 19686 GAGCAGGAGCAGGAGTTAGAGGATCAGGAGCAGGAGTTAGAGGAGCAGGAGCAGGAGTTA 19627

Qy 694 GAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCT 753
Db 19626 GAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGCAGGAG 19567

```
Qy     754 CGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGC 813
           |||     | | |   |   ||   |  | || |||| || | |        |
Db   19566 TTAGAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGCAG 19507

Qy     814 AAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAACTGAGGTCAGCCCAG 873
           ||||  ||   |   |    ||| | ||  ||    || | |||  |          ||
Db   19506 GAGTTAGAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGGTGGAAGAGCAAGAGCAGGAG 19447

Qy     874 AAGGACTTACAAAGTGCTGACCAGGA 899
           |||    |||      || |||||
Db   19446 GTGGAAGAGCAAGAGCAGGAGCAGGA 19421
```

RESULT 31
AAV19941/c
ID AAV19941 standard; DNA; 137507 BP.
XX
AC AAV19941;
XX
DT 03-AUG-1998 (first entry)
XX
DE KSHV long unique coding region and terminal repeat.
XX
KW KSHV; HHV8; human herpes virus 8; macrophage inflammatory protein II;
KW interleukin-6; IL-6; interferon regulatory factor; rheumatoid arthritis;
KW complement-binding protein; glycoprotein; capsid protein IV; infection;
KW immediate early protein; Kaposi's sarcoma; protective vaccine; lymphoma;
KW lymphoproliferative disease; leukaemia; splenomegaly; mycosis fungoides;
KW HIV immune status; anti-inflammatory agent; therapy; ds.
XX
OS Kaposi's sarcoma-associated herpes virus.
XX

FH	Key	Location/Qualifiers
FT	CDS	1142..2794
FT		/*tag= a
FT		/product= complement-binding protein
FT	CDS	8699..11236
FT		/*tag= b
FT		/product= glycoprotein B
FT	CDS	complement (17261..17875)
FT		/*tag= c
FT		/product= interleukin 6
FT	CDS	complement (21548..21832)
FT		/*tag= d
FT		/product= macrophage inflammatory protein II
FT	CDS	complement (27137..27424)
FT		/*tag= e
FT		/product= interferon regulatory factor 1
FT	CDS	28661..29741
FT		/*tag= f
FT		/product= protein T1.1
FT	CDS	complement (58976..60175)
FT		/*tag= g
FT		/product= glycoprotein M
FT	CDS	complement (69412..69915)
FT		/*tag= h
FT		/product= glycoprotein L
FT	CDS	complement (88410..88910)
FT		/*tag= i
FT		/product= interferon regulatory factor 2
FT	CDS	89600..90541
FT		/*tag= j
FT		/product= interferon regulatory factor 3
FT	CDS	90173..90643
FT		/*tag= k
FT		/product= glycoprotein X
FT	CDS	complement (93636..94127)
FT		/*tag= l
FT		/product= interferon regulatory factor 4
FT	CDS	complement (111931..112443)
FT		/*tag= m
FT		/product= capsid protein IV
FT	CDS	complement (123808..127296)
FT		/*tag= n
FT		/product= immediate early protein

XX
PN WO9804576-A1.
XX
PD 05-FEB-1998.
XX
PF 22-JUL-1997; 97WO-US13346.
XX
PR 29-NOV-1996; 96US-0757669.
PR 25-JUL-1996; 96US-0686243.
PR 25-JUL-1996; 96US-0686349.
PR 25-JUL-1996; 96US-0686350.
PR 25-JUL-1996; 96US-0687253.
PR 25-JUL-1996; 96US-0688814.
PR 05-SEP-1996; 96US-0708678.
PR 10-OCT-1996; 96US-0728323.
PR 13-NOV-1996; 96US-0747887.
PR 13-NOV-1996; 96US-0748640.
XX
PA (UYCO) UNIV COLUMBIA NEW YORK.
XX
PI Bohenzky RA, Chang Y, Edelman IS, Moore PS, Russo JJ;
XX
DR WPI; 1998-130615/12.
XX
PT New nucleic acid encoding Kaposi's sarcoma associated herpes virus
PT proteins - useful for, e.g. detecting levels of HHV8 in, and
PT preparation of vaccines for treatment of, HIV patients
XX
PS Example 2; Page 135-203; 230pp; English.
XX
CC This sequence represents the long unique region and terminal repeat of
CC the Kaposi's sarcoma-associated herpes virus (KSHV). KSHV is also known
CC as human herpes virus 8 (HHV8). This sequence contains the DNAs of the
CC invention which encode KSHV polypeptides selected from: (a) viral
CC macrophage inflammatory protein (MIP) II; (b) viral interleukin-6 (IL-6);
CC (c) viral IRF 1; (d) complement-binding protein; glycoproteins B, M or L;
CC (d) capsid protein IV encoded by ORF65; and (e) immediate early protein
CC encoded by ORF73. Labelled probes for the nucleic acid, proteins encoded
CC by it, and antibodies (Ab) specific for the proteins are useful for
CC detecting HHV8, specifically for diagnosis of Kaposi's sarcoma, in body
CC fluids or tissue samples. HHV8 infections can be treated with antisense
CC or triplex forming molecules or agents that bind specifically to the
CC protein. Ab may be used for prophylaxis or treatment of HHV8 infection,
CC while the protein can be used in protective vaccines. Ab may also be used
CC to differentiate between lymphomas, and HHV8 may be implicated in many
CC other lymphoproliferative diseases such as lymphomas, leukaemia,
CC splenomegaly and mycosis fungoides. Cells and animals containing the
CC nucleic acid are useful for drug screening. HHV8-derived peptides can be
CC used as targets for antiviral drugs, e.g. dihydrofolate reductase gene
CC can be inhibited with methotrexate. These can also be used to determine
CC the immune status of a patient infected with HIV. HHV8 derived protein
CC viral MIP III may be used as an anti-inflammatory agent for,
CC e.g. treating rheumatoid arthritis. This sequence is stated as containing
CC 81 open reading frames.
XX
SQ Sequence 137507 BP; 32579 A; 37795 C; 35758 G; 31375 T; 0 other;

Query Match 2.0%; Score 40.4; DB 19; Length 137507;
Best Local Similarity 44.0%; Pred. No. 9.4;
Matches 170; Conservative 0; Mismatches 216; Indels 0; Gaps 0;

```
Qy     514 CTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAG 573
           | | |  |  ||  | ||   | |||  ||| |||| |  ||    | ||    | | ||
Db  125106 CAGCAGGATGAGCAGCAGCAGCAGGATGAGCAGCAGCAGCAGGATGAGCAGCAGCAGCAG 125047

Qy     574 GAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAG 633
           || |  ||    |   ||    ||  | |      |||| |    ||||      |  ||
Db  125046 GATGAACAGGAGCAGCAGGAGGAGCAGGAGCAGCAGGAGGAGCAGGAGCAGGAGTTAGAG 124987

Qy     634 AGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTG 693
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Db 124986 GAGCAGGAGCAGGAGTTAGAGGATCAGGAGCAGGAGTTAGAGGAGCAGGAGCAGGAGTTA 124927

Qy    694 GAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAAGCT 753
          ||| ||| ||    | | |  | |    |   || | ||||  ||| | | | || | |
Db 124926 GAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGCAGGAG 124867

Qy    754 CGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGGAGC 813
            |||     | | |   |   ||   |  | || |||| || | |         |
Db 124866 TTAGAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGCAG 124807

Qy    814 AAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAACTGAGGTCAGCCCAG 873
          ||||  ||   |   |   ||| | ||  ||    || | |||  |            ||
Db 124806 GAGTTAGAGGAGCAGGAGCAGGAGTTAGAGGAGCAGGAGGTGGAAGAGCAAGAGCAGGAG 124747

Qy    874 AAGGACTTACAAAGTGCTGACCAGGA 899
            |||   |||      || |||||
Db 124746 GTGGAAGAGCAAGAGCAGGAGCAGGA 124721
```

RESULT 32
AAX83007/c
ID AAX83007 standard; DNA; 51259 BP.
XX
AC AAX83007;
XX
DT 31-AUG-1999 (first entry)
XX
DE Partial mouse WRN genomic sequence #3.
XX
KW Mouse; WRN; Werner's syndrome; detection; diagnosis; autosomal;
KW recessive disorder; phenotype; ss.
XX
OS Mus musculus.
XX
PN WO9724435-A1.
XX
PD 10-JUL-1997.
XX
PF 30-DEC-1996; 96WO-US20785.
XX
PR 12-APR-1996; 96US-0632175.
PR 29-DEC-1995; 95US-0009409.
PR 29-DEC-1995; 95US-0580539.
PR 30-JAN-1996; 96US-0010835.
PR 30-JAN-1996; 96US-0594242.
XX
PA (DARW-) DARWIN MOLECULAR CORP.
PA (OSHI/) OSHIMA J.
XX
PI Fu Y, Mulligan J, Oshima J, Schellenberg GD, Yu C;
XX
DR WPI; 1997-363671/33.
XX
PT Isolated nucleic acid molecule encoding the WRN gene product -
PT useful for detection and treatment of Werner's syndrome, and related
PT diseases
XX
PS Claim 1; Fig 7; 153pp; English.
XX
CC This sequence represents a fragment of the genomic sequence containing
CC the coding region for the mouse WRN gene (AAX83004). The corresponding
CC human gene (AAX83001) encodes a protein related to Werner's syndrome.
CC The products can be used for the detection and treatment of Werner's
CC syndrome (WS), an autosomal recessive disorder with a complex phenotype,
CC as well as related diseases.
XX
SQ Sequence 51259 BP; 14533 A; 9635 C; 10266 G; 16825 T; 0 other;

Query Match 2.0%; Score 40.2; DB 18; Length 51259;
Best Local Similarity 48.1%; Pred. No. 6.3;
Matches 114; Conservative 0; Mismatches 123; Indels 0; Gaps 0;

```
Qy    513 CCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGA 572
          | |||| ||  ||  | ||     |||| ||  | |||| |||    |  | |  | |||
Db    269 CATGAAGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGCAGGA 210

Qy    573 GGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCA 632
          |||||   |   |    ||   ||  ||| |    ||||||    |||         ||
Db    209 GGAGGAGGAGGAAGAGGAGGAGGAGGAGAAGAAGGAGGAGCAGGAGGAGGAGGAGCA 150

Qy    633 GAGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGT 692
          |    ||       ||| |||| ||  ||     || | ||  | |   ||   | ||
Db    149 GGAGGAGGAGGAGAAGGAGGAGAAGGAGAAGGAGGAGAAGGAGGGGCAGGAGGAGGAGGA 90

Qy    693 GGAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGA 749
          |||| ||  ||  | | |      |   |   || | ||| | ||| |   | ||||
Db     89 GGAGGAGGAGGAGGAGCAGGAGCAGGAACAGGAGCAGGAGGAGGAGGAGGAGCAGGA 33
```

RESULT 33
AAC59944
ID AAC59944 standard; cDNA; 941 BP.
XX
AC AAC59944;
XX
DT 30-JAN-2001 (first entry)
XX
DE Human secreted protein cDNA sequence #38.
XX
KW Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral;
KW antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer;
KW vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic;
KW cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder;
KW neurological disease; infection; human; secreted protein; ss.
XX
OS Homo sapiens.
XX
PN WO200055198-A1.
XX
PD 21-SEP-2000.
XX
PF 09-MAR-2000; 2000WO-US06012.
XX
PR 12-MAR-1999; 99US-0124093.
PR 23-NOV-1999; 99US-0166989.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
XX
PI Rosen CA, Ruben SM, Komatsoulis G;
XX
DR WPI; 2000-587520/55.
DR P-PSDB; AAB28739.
XX
PT Human secreted proteins and the nucleic acids that encode them, useful
PT in gene therapy protocols and recombinant nucleic acid based procedures
PT -
XX
PS Claim 1; Page 337; 391pp; English.
XX
CC The invention relate to the isolation of genes AAC59907-C59956 encoding
CC 50 human secreted proteins AAB28702-B28751. The genes can be used to
CC generate fusion proteins by linking to the gene for the human
CC immunoglobulin G Fc portion for increasing the stability of
CC the fusion protein as compared to the human protein only. The genes and
CC proteins are useful for preventing, ameliorating or treating medical
CC conditions, e.g. by protein or gene therapy. The genes are isolated
CC from a range of human tissues disclosed in the specification. The
CC nucleic acids, proteins, antibodies and (ant)agonists are useful in
CC the diagnosis, treatment and prevention of: (a) cancer, e.g. breast
CC and ovarian cancer, and other cancers of the adrenal gland, bone, bone
CC marrow, breast, gastrointestinal tract, liver, lung, or urogenital;
CC (b) immune disorders e.g. Addison's disease, allergies, autoimmune
CC haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's
CC disease, multiple sclerosis, rheumatoid arthritis and ulcerative

```
CC   colitis; (c) cardiovascular disorders such as myocardial ischaemias; (d)
CC   wound healing; (e) neurological diseases e.g. cerebral anoxia and
CC   epilepsy; and (f) infectious diseases such as viral, bacterial, fungal
CC   and parasitic infections.
XX
SQ   Sequence 941 BP; 227 A; 187 C; 228 G; 299 T; 0 other;


  Query Match             2.0%;  Score 40;  DB 21;  Length 941;
  Best Local Similarity   64.4%;  Pred. No. 0.81;
  Matches   76;  Conservative    0;  Mismatches   40;  Indels    2;  Gaps    1;

Qy   1860 CCTGCCTCCAGCTTATTGCTTGAAATTATGGGGTGAGGTGGTGATAGGGAA--AGGTTGG 1917
            ||||| ||     |||||| ||  |||   | ||| ||  ||||||    |   |  |
Db    816 cctgcatcatctgtattgcgtgctatttcagagtggggaagtgataaactatttgccttc 875

Qy   1918 GGAAGTTTTCTGTGTAAAATAAAAAGGGATCTTTTCTTCAAAAAAAAAAAAAAAAAAAA 1975
           | || | | |||| |||| ||||   | |||  ||  ||||||||||||||||||
Db    876 tggagctctttgtgaaaaattaaaaaaaaacttagctcaaaaaaaaaaaaaaaaaaaa 933


RESULT  34
AAS85420
ID   AAS85420 standard; cDNA; 5874 BP.
XX
AC   AAS85420;
XX
DT   13-FEB-2002  (first entry)
XX
DE   DNA encoding novel human diagnostic protein #21224.
XX
KW   Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW   food supplement; medical imaging; diagnostic; genetic disorder; ss.
XX
OS   Homo sapiens.
XX
PN   WO200175067-A2.
XX
PD   11-OCT-2001.
XX
PF   30-MAR-2001; 2001WO-US08631.
XX
PR   31-MAR-2000; 2000US-0540217.
PR   23-AUG-2000; 2000US-0649167.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Drmanac RT,  Liu C,  Tang YT;
XX
DR   WPI; 2001-639362/73.
DR   P-PSDB; ABG21233.
XX
PT   New isolated polynucleotide and encoded polypeptides, useful in
PT   diagnostics, forensics, gene mapping, identification of mutations
PT   responsible for genetic disorders or other traits and to assess
PT   biodiversity -
XX
PS   Claim 1; SEQ ID No 21224; 103pp; English.
XX
CC   The invention relates to isolated polynucleotide (I) and
CC   polypeptide (II) sequences. (I) is useful as hybridisation probes,
CC   polymerase chain reaction (PCR) primers, oligomers, and for chromosome
CC   and gene mapping, and in recombinant production of (II). The
CC   polynucleotides are also used in diagnostics as expressed sequence tags
CC   for identifying expressed genes. (I) is useful in gene therapy techniques
CC   to restore normal activity of (II) or to treat disease states involving
CC   (II). (II) is useful for generating antibodies against it, detecting or
CC   quantitating a polypeptide in tissue, as molecular weight markers and as
CC   a food supplement. (II) and its binding partners are useful in medical
CC   imaging of sites expressing (II). (I) and (II) are useful for treating
CC   disorders involving aberrant protein expression or biological activity.
CC   The polypeptide and polynucleotide sequences have applications in
CC   diagnostics, forensics, gene mapping, identification of mutations
CC   responsible for genetic disorders or other traits to assess biodiversity
CC   and to produce other types of data and products dependent on DNA and
CC   amino acid sequences. AAS64197-AAS94564 represent novel human
CC   diagnostic coding sequences of the invention.
CC   Note: The sequence data for this patent did not appear in the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 5874 BP; 1888 A; 1291 C; 1579 G; 1116 T; 0 other;


  Query Match             2.0%;  Score 40;  DB 23;  Length 5874;
  Best Local Similarity   47.3%;  Pred. No. 2.2;
  Matches  121;  Conservative    0;  Mismatches  135;  Indels    0;  Gaps    0;

Qy    691 GTGGAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGAGTATGAGAATCTGAAGGAA 750
          ||||| |       ||    |||| |  | ||| | ||  || |    ||  |  |  |
Db   4335 gtggaacgatctaatgctgcctgcatagctctcgataagaagcaaagaaactttgacaag 4394

Qy    751 GCTCGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAAGGATTTGGTGTCCTCTAGG 810
          | || |   |          |   |  |||         ||   ||  | | | ||||   |
Db   4395 gttctggcagaatggaaacagaagtatgaggaaactcaggctgaacttgaggcctcccag 4454

Qy    811 AGCAAGTTGAAGACTCTCAACACTGAGCTGGATCAGGCCAAGTTAGAACTGAGGTCAGCC 870
          |   ||| |    |||||| ||||||||||    |||  |||   |       |  | ||
Db   4455 aaggagtcgcgttctctcagcactgagctgttcaaggtgaagaatgcctacgaggaatcc 4514

Qy    871 CAGAAGGACTTACAAAGTGCTGACCAGGAGATCACGAGCCTAAGAAAGAAGTCTGATGAT 930
          | | |  |  |  ||| |    | |  ||||  | || | ||  | || ||  |  |||
Db   4515 ctggatcatcttgaaactctaaagcgagagaataagaacttacaacaggagatttctgac 4574

Qy    931 CCTCCAGGGAACCTTG 946
          |   ||| | |  |||
Db   4575 ctgacagagcaaattg 4590


RESULT  35
AAS46362
ID   AAS46362 standard; DNA; 6413 BP.
XX
AC   AAS46362;
XX
DT   18-DEC-2001  (first entry)
XX
DE   Tumour suppressor gene derived chemically modified sequence #84.
XX
KW   Human; tumour suppressor gene; oncogene; antitumour; cytostatic;
KW   cancer; tumour; CpG dinucleotide; single-nucleotide polymorphism; SNP;
KW   cytosine methylation; ds.
XX
OS   Homo sapiens.
XX
PN   WO200168912-A2.
XX
PD   20-SEP-2001.
XX
PF   15-MAR-2001; 2001WO-EP02955.
XX
PR   15-MAR-2000; 2000DE-1013847.
PR   06-APR-2000; 2000DE-1019058.
PR   07-APR-2000; 2000DE-1019173.
PR   30-JUN-2000; 2000DE-1032529.
PR   01-SEP-2000; 2000DE-1043826.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-602752/68.
XX
PT   Fragments of chemically modified genes associated with tumour suppressor
PT   genes and oncogenes, useful in designing primers and probes for
PT   analysing diseases associated with cytosine methylation state e.g.
```

```
PT   cancer -
XX
PS   Claim 1; SEQ ID No 84; 27pp; English.
XX
CC   The invention relates to a nucleic acid comprising a sequence of 18
CC   bases, of a segment of chemically pretreated DNA (CP DNA) e.g. with
CC   bisulphite, of genes associated with tumour suppression and
CC   oncogenes having a sequence taken from 536 (actually 533 since
CC   numbers 408, 458 and 500 are missing from the sequence listing) sequences
CC   (Ss) and sequences complementary to (Ss). The nucleic acid may be a
CC   peptide nucleic acid-oligomer (PNA) of at least 9 nucleotides and may
CC   form part of a set of probes for detecting the cytosine methylation state
CC   and/or single nucleotide polymorphisms and also to be used in an
CC   array for analysing diseases associated with CpG dinucleotides e.g.
CC   cancers and tumours. The probes can also be used in a method for
CC   ascertaining genetic and/or epigenetic parameters for the diagnosis
CC   and/or therapy of existing diseases or the predisposition to specific
CC   diseases, by analysing cytosine methylations. The parameters may be
CC   compared to another set of genetic and/or epigenetic parameters, the
CC   differences serving as basis for diagnosis and/or prognosis events which
CC   are disadvantageous to patients. The present sequence is one of the
CC   533 genomic sequences derived from tumour suppressor genes and
CC   oncogenes. Sequences with even numbered Seq ID numbers are the
CC   complementary sequence of the corresponding odd numbered sequence (e.g.
CC   ID 2 and ID1, ID 536 and ID 535, except for those whose partner sequence
CC   is missing).
CC   Note: The sequence data for this patent did not form part
CC   of the printed specification, but was obtained in electronic
CC   format directly from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 6413 BP; 1401 A; 100 C; 1647 G; 3263 T; 2 other;


  Query Match              2.0%;  Score 40;  DB 22;  Length 6413;
  Best Local Similarity   65.9%;  Pred. No. 2.3;
  Matches   58;  Conservative    0;  Mismatches   30;  Indels    0;  Gaps    0;

Qy    1888 TGGGGTGAGGTGGTGATAGGGAAAGGTTGGGGAAGTTTTCTGTGTAAAATAAAAAGGGAT 1947
           | || |||||| ||  |  |    | ||| |  | |||  | ||   |||| | || |||
Db    1837 taggttgaggttgtagtgagttgtgtttgcgttattttagtttgggtaatagagagagat 1896

Qy    1948 CTTTTCTTCAAAAAAAAAAAAAAAAAA 1975
           || | ||  ||||||||||||||||||
Db    1897 tttgttttataaaaaaaaaaaaaaaaa 1924


RESULT  36
AAA10594
ID   AAA10594 standard; DNA; 10732 BP.
XX
AC   AAA10594;
XX
DT   29-JUN-2000  (first entry)
XX
DE   Gene encoding a subunit of cellulose synthase.
XX
KW   Cellulose synthase; cellulose production; increase yield; ds.
XX
OS   Vigna angularis.
XX
PN   JP2000060568-A.
XX
PD   29-FEB-2000.
XX
PF   26-AUG-1998;   98JP-0239998.
XX
PR   26-AUG-1998;   98JP-0239998.
XX
PA   (MIZU/) MIZUNO K.
PA   (OJIP ) OJI PAPER CO.
XX
DR   WPI; 2000-342371/30.
DR   P-PSDB; AAY85179.
XX
PT   A gene encoding a cellulose synthetic equipment - for the improvement
PT   in the amount of cellulose synthesised in a plant body
XX
PS   Claim 2; Page 14-21; 32pp; Japanese.
XX
CC   This sequence represents a gene encoding a subunit of the cellulose
CC   synthase complex of Vigna angularis. The invention relates to subunits of
CC   cellulose synthetic equipment, that can be used to increase the amount of
CC   cellulose synthesised by a plant. The proteins and genes encoding them
CC   can also be used to improve the properties of the cellulose being
CC   produced by a plant.
XX
SQ   Sequence 10732 BP; 3149 A; 1212 C; 2074 G; 2046 T; 2251 other;


  Query Match              2.0%;  Score 40;  DB 21;  Length 10732;
  Best Local Similarity   18.5%;  Pred. No. 3.1;
  Matches  106;  Conservative  191;  Mismatches  272;  Indels    4;  Gaps    2;

Qy     372 AGCTCAGCTTTCCCAGAAAGACAGGGAGAAACGGGACAGCCAGGCCATTATCGACACTCT 431
           |:: : :  ::: :|||: :| :  :  :| ::::|::| : |  :|  | :::   ::
Db    9945 assryssrgyysgvagargraavaastyrassrsrasrgnysgygyargashsrtyrysa 10004

Qy     432 ACGGGACACCCTGGAAGAACGCAATGCTACCGTGGAGTCCCTACAGAACGCCTTAAACAA 491
             |     :  :  :: :| : :|:| |::: ::::|  :: |   : : |: | :|: :
Db   10005 sngymtrthrgytyrmtvaargvahgntrysthrsrgsrysvagghhsvacystyrassr 10064

Qy     492 GGCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCAGCGGCAGGA 551
           | :  ::|  : |:   : | : :: ::|||: ::|      :::::    : :::: |
Db   10065 gyysthrastyrgyasnhaagythrthraaastrmtasnhscyshsrgnasvasrsrmta 10124

Qy     552 TGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAAAACCATGGA 611
           ||:| :     : :|  :|  :|:|:    :|          ::||  ||: :: | |||
Db   10125 rgasaaysysgnhastrasgthrargsrasgyggasngthrhsvagysgarghsrargga 10184

Qy     612 GCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGATTCGAGACAT 671
           :  :   | : |: |:   | : |::  :|  : | | ::  :    :: :|::|: :|
Db   10185 snsrsrrgnvathrthrsrcys-gyhsasgnasngygtyrtyrasngysghthrasysas 10243

Qy     672 GGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCCTCAAGAAAGA 731
           ::   |::   : :|| :|::| : |  :: : : | ::| :      :     ::|:
Db   10244 yssraagsrgnysgvagargysgnsraathrasarggsrmtasngngngsrgysthrass 10303

Qy     732 GTATGAGAATCTGAAGGAAGCTCGGAAGGCCACAGGGGAACTGGCTGACAGGTTGAAGAA 791
           : : |   ::: | : :       :   : :    : :    :   |  :: : ||||
Db   10304 rargggnsrhysgsrasngygngasngysasngnysasnsrasnasggnhsthrgaagys 10363

Qy     792 GGATTTGGTGTCCTCTAGGAGCAAGTTGAAGACTCTCAA---CACTGAGCTGGATCAGGC 848
           | :  :   : ::  |||:      ::|: |::   |   | : | |  :::|:: :
Db   10364 aaaahsasnysvahsrgggasnysasnsrasncysgggaayscysggngngsrmtsrysg 10423

Qy     849 CAAGTTAGAACTGAGGTCAGCCCAGAAGGACTTACAAAGTGCTGACCAGGAGATCACGAG 908
           |  : :   |: : :  : :   |: |: : |:: |||: |:  | | :| | : |:
Db   10424 cyssryshsasasysasysrargasnastrgthraaaasrgysaagcysgngthrasngy 10483

Qy     909 CCTAAGAAAGAAGTCTGATGATCCTCCAGGGAA 941
           ::   :||: ||   ::|  |  : :::: :||
Db   10484 ysgnysaamtaaaarysasaasrhassrvavaa 10516


RESULT  37
ABL06323
ID   ABL06323 standard; cDNA; 1931 BP.
XX
AC   ABL06323;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Drosophila melanogaster expressed polynucleotide SEQ ID NO 13451.
XX
KW   Drosophila; developmental biology; cell signalling; insecticide;
```

```
KW   pharmaceutical; gene; ss.
XX
OS   Drosophila melanogaster.
XX
PN   WO200171042-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US09231.
XX
PR   23-MAR-2000; 2000US-191637P.
PR   11-JUL-2000; 2000US-0614150.
XX
PA   (PEKE ) PE CORP NY.
XX
PI   Venter JC,  Adams M,  Li PWD,  Myers EW;
XX
DR   WPI; 2001-656860/75.
DR   P-PSDB; ABB62220.
XX
PT   New isolated nucleic acid detection reagent for detecting 1000 or more
PT   genes from Drosophila and for elucidating cell signalling and cell-cell
PT   interactions -
XX
PS   Claim 1; SEQ ID NO 13451; 21pp + Sequence Listing; English.
XX
CC   The invention relates to an isolated nucleic acid detection reagent
CC   capable of detecting 1000 or more genes from Drosophila. The invention is
CC   useful in developmental biology and in elucidating cell signalling and
CC   cell-cell interactions in higher eukaryotes for the development of
CC   insecticides, therapeutics and pharmaceutical drugs. The invention
CC   discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC   sequences (ABL01840-ABL16175) and the encoded proteins
CC   (ABB57737-ABB72072).
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 1931 BP; 543 A; 499 C; 552 G; 337 T; 0 other;


  Query Match             2.0%;  Score 39.8;  DB 23;  Length 1931;
  Best Local Similarity   46.8%;  Pred. No. 1.4;
  Matches  125;  Conservative    0;  Mismatches  142;  Indels    0;  Gaps    0;

Qy     476 AGAACGCCTTAAACAAGGCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCC 535
           ||||   |   ||  ||  | |||  | |     ||      |  |||||| |||    |
Db     988 agaagaaccagaaacagaaacagaaacagaagaacaagaatcagcaacagaagaacaagc 1047

Qy     536 TGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCA 595
             |||||| | || |    |   |||| |||| || || |  || |     |||   |
Db    1048 gacagcagcagaagaaacgcaagcaacaggctcaagatgacgagcagcctgcgaagcaaa 1107

Qy     596 AGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGG 655
           |||  ||  |   | ||||   | |     |      |||  |||  |   ||     ||
Db    1108 agaaaaagccgcagcagcaggataaagatcagaaaaagaagcaggataaggatcaaaaga 1167

Qy     656 AGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCG 715
           |||  ||  | |||   |  |      |||   | | ||||  |||||  ||         |
Db    1168 agaagaagccagaggagaatccaaatcagcaggagatggaacagcttactcccgtggaag 1227

Qy     716 TGTCCCTCAAGAAAGAGTATGAGAATC 742
           ||  |   |||  || |  |  | | |
Db    1228 tgatcaagaagccagtggctatggaac 1254


RESULT  38
ABL06322
ID   ABL06322 standard; cDNA; 3931 BP.
XX
AC   ABL06322;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Drosophila melanogaster expressed polynucleotide SEQ ID NO 13448.
XX
KW   Drosophila; developmental biology; cell signalling; insecticide;
KW   pharmaceutical; gene; ss.
XX
OS   Drosophila melanogaster.
XX
PN   WO200171042-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US09231.
XX
PR   23-MAR-2000; 2000US-191637P.
PR   11-JUL-2000; 2000US-0614150.
XX
PA   (PEKE ) PE CORP NY.
XX
PI   Venter JC,  Adams M,  Li PWD,  Myers EW;
XX
DR   WPI; 2001-656860/75.
DR   P-PSDB; ABB62219.
XX
PT   New isolated nucleic acid detection reagent for detecting 1000 or more
PT   genes from Drosophila and for elucidating cell signalling and cell-cell
PT   interactions -
XX
PS   Claim 1; SEQ ID NO 13448; 21pp + Sequence Listing; English.
XX
CC   The invention relates to an isolated nucleic acid detection reagent
CC   capable of detecting 1000 or more genes from Drosophila. The invention is
CC   useful in developmental biology and in elucidating cell signalling and
CC   cell-cell interactions in higher eukaryotes for the development of
CC   insecticides, therapeutics and pharmaceutical drugs. The invention
CC   discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC   sequences (ABL01840-ABL16175) and the encoded proteins
CC   (ABB57737-ABB72072).
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 3931 BP; 1137 A; 887 C; 966 G; 941 T; 0 other;


  Query Match             2.0%;  Score 39.8;  DB 23;  Length 3931;
  Best Local Similarity   46.8%;  Pred. No. 2;
  Matches  125;  Conservative    0;  Mismatches  142;  Indels    0;  Gaps    0;

Qy     476 AGAACGCCTTAAACAAGGCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCC 535
           ||||   |   ||  ||  | |||  | |     ||      |  |||||| |||    |
Db    1988 agaagaaccagaaacagaaacagaaacagaagaacaagaatcagcaacagaagaacaagc 2047

Qy     536 TGGAGCAGCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCA 595
             |||||| | || |    |   |||| |||| || || |  || |     |||   |
Db    2048 gacagcagcagaagaaacgcaagcaacaggctcaagatgacgagcagcctgcgaagcaaa 2107

Qy     596 AGATGAAAACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGG 655
           |||  ||  |   | ||||   | |     |      |||  |||  |   ||     ||
Db    2108 agaaaaagccgcagcagcaggataaagatcagaaaaagaagcaggataaggatcaaaaga 2167

Qy     656 AGATGATTCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCG 715
           |||  ||  | |||   |  |      |||   | | ||||  |||||  ||         |
Db    2168 agaagaagccagaggagaatccaaatcagcaggagatggaacagcttactcccgtggaag 2227

Qy     716 TGTCCCTCAAGAAAGAGTATGAGAATC 742
           ||  |   |||  || |  |  | | |
Db    2228 tgatcaagaagccagtggctatggaac 2254


RESULT  39
ABA58819/c
ID   ABA58819 standard; DNA; 475 BP.
```

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XX
AC   ABA58819;
XX
DT   01-FEB-2002  (first entry)
XX
DE   Human foetal liver single exon nucleic acid probe #7124.
XX
KW   Human; foetal liver; gene expression; single exon nucleic acid probe; ss.
XX
OS   Homo sapiens.
XX
PN   WO200157277-A2.
XX
PD   09-AUG-2001.
XX
PF   30-JAN-2001; 2001WO-US00669.
XX
PR   04-FEB-2000; 2000US-0180312.
PR   26-MAY-2000; 2000US-0207456.
PR   30-JUN-2000; 2000US-0608408.
PR   03-AUG-2000; 2000US-0632366.
PR   21-SEP-2000; 2000US-0234687.
PR   27-SEP-2000; 2000US-0236359.
PR   04-OCT-2000; 2000GB-0024263.
XX
PA   (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI   Penn SG,  Hanzel DK,  Chen W,  Rank DR;
XX
DR   WPI; 2001-483447/52.
XX
PT   Human genome-derived single exon nucleic acid probes useful for
PT   analyzing gene expression in human fetal liver -
XX
PS   Claim 1; SEQ ID NO 7124; 639pp + sequence listing; English.
XX
CC   The invention relates to a single exon nucleic acid probe for
CC   measuring human gene expression in a sample derived from human foetal
CC   liver. The single exon nucleic acid probes may be used for predicting,
CC   measuring and displaying gene expression in samples derived from human
CC   fetal liver. The present sequence is a single exon nucleic acid
CC   probe of the invention.
CC   Note: The sequence data for this patent did not form part of the
CC   printed specification, but was obtained in electronic format directly
CC   from WIPO at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 475 BP; 38 A; 198 C; 45 G; 194 T; 0 other;


  Query Match             2.0%;  Score 39.6;  DB 22;  Length 475;
  Best Local Similarity   46.4%;  Pred. No. 0.73;
  Matches  129;  Conservative    0;  Mismatches  149;  Indels    0;  Gaps    0;

Qy    483 CTTAAACAAGGCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCA 542
          ||| | |  || ||| |      | |||   || ||||||||||| ||||     | || |
Db    401 CTTCAGCCTGGGAGACAGAGCAAGATCCTGTCTCAAAAAACAGAAGAAGAGGAAGAAGGA 342

Qy    543 GCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAA 602
          |  | || | |||    |  |       ||||||    |         ||   |||| |||
Db    341 GAAGGAGAAGGAGGAGGAGGAGAAGGAAGAGGAGAAAGAGGAGGAGGAGGAGAAGAAGAA 282

Qy    603 AACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGAT 662
           |  | | || | |   ||          ||    ||      |||| |||||||| ||
Db    281 GAAGAAGAAGAAGAAGAAGAAGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGAAGAA 222

Qy    663 TCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCCT 722
            | | |     |    |    | |   ||| ||  ||  | | |      |
Db    221 GAAGAAGAAGAAGAAGAAGGAAGAGGAGAAAGAGGAGGAGGAGGAGAAGAAGAAGAAGAA 162

Qy    723 CAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGG 760
          |||||  || | ||| |   | |||| |    |||||
Db    161 GAAGAAGAAGGAGGAGGAGGAGGAGGAGGAGGAAGG 124
```

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RESULT  40
ABA27737/c
ID   ABA27737 standard; DNA; 475 BP.
XX
AC   ABA27737;
XX
DT   23-JAN-2002  (first entry)
XX
DE   Probe #6203 for gene expression analysis in human heart cell sample.
XX
KW   Human; gene expression; heart; microarray; vascular system; probe;
KW   cardiovascular disease; hypertension; cardiac arrhythmia;
KW   congenital heart disease; ss.
XX
OS   Homo sapiens.
XX
PN   WO200157274-A2.
XX
PD   09-AUG-2001.
XX
PF   30-JAN-2001; 2001WO-US00666.
XX
PR   04-FEB-2000; 2000US-0180312.
PR   26-MAY-2000; 2000US-0207456.
PR   30-JUN-2000; 2000US-0608408.
PR   03-AUG-2000; 2000US-0632366.
PR   21-SEP-2000; 2000US-0234687.
PR   27-SEP-2000; 2000US-0236359.
PR   04-OCT-2000; 2000GB-0024263.
XX
PA   (MOLE-) MOLECULAR DYNAMICS INC.
XX
PI   Penn SG,  Hanzel DK,  Chen W,  Rank DR;
XX
DR   WPI; 2001-488899/53.
XX
PT   Single exon nucleic acid probes for analyzing gene expression in human
PT   hearts -
XX
PS   Claim 1; SEQ ID No 6203; 530pp; English.
XX
CC   The present invention relates to single exon nucleic acid probes for
CC   measuring human gene expression in a sample derived from human heart. The
CC   present sequence is one such probe. The probes may be used for
CC   predicting, measuring and displaying gene expression in samples derived
CC   from the human heart via microarrays. By measuring gene expression, the
CC   probes are useful for predicting, diagnosing, grading, staging,
CC   monitoring and prognosing diseases of the human heart and vascular system
CC   e.g. cardiovascular disease, hypertension, cardiac arrhythmias and
CC   congenital heart disease.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 475 BP; 38 A; 198 C; 45 G; 194 T; 0 other;


  Query Match             2.0%;  Score 39.6;  DB 22;  Length 475;
  Best Local Similarity   46.4%;  Pred. No. 0.73;
  Matches  129;  Conservative    0;  Mismatches  149;  Indels    0;  Gaps    0;

Qy    483 CTTAAACAAGGCAGAGATGCTGTGTTCCACCCTGAAAAAACAGATGAAGTTCCTGGAGCA 542
          ||| | |  || ||| |      | |||   || ||||||||||| ||||     | || |
Db    401 CTTCAGCCTGGGAGACAGAGCAAGATCCTGTCTCAAAAAACAGAAGAAGAGGAAGAAGGA 342

Qy    543 GCGGCAGGATGAGACCAAACAAGCTCGGGAGGAGGCCCACCGACTCAAGTGCAAGATGAA 602
          |  | || | |||    |  |       ||||||    |         ||   |||| |||
Db    341 GAAGGAGAAGGAGGAGGAGGAGAAGGAAGAGGAGAAAGAGGAGGAGGAGGAGAAGAAGAA 282

Qy    603 AACCATGGAGCAAATTGAGCTCCTACTCCAGAGCCAGCGTTCTGAGGTGGAGGAGATGAT 662
           |  | | || | |   ||          ||    ||      |||| |||||||| ||
Db    281 GAAGAAGAAGAAGAAGAAGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGAAGAA 222
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Qy     663 TCGAGACATGGGTGTGGGACAGTCAGCGGTGGAGCAGCTGGCTGTGTACTGCGTGTCCCT 722
           | | |     |    |    | |   ||| ||  ||  | | |      |
Db     221 GAAGAAGAAGAAGAAGGAAGAGGAGAAAGAGGAGGAGGAGGAGAAGAAGAAGAAGAA 162

Qy     723 CAAGAAAGAGTATGAGAATCTGAAGGAAGCTCGGAAGG 760
           |||||  || | ||| |   | |||| |    |||||
Db     161 GAAGAAGAAGGAGGAGGAGGAGGAGGAGGAGAAGG 124


Search completed: September  4, 2002, 14:04:16
Job time: 9260 sec
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